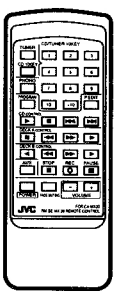
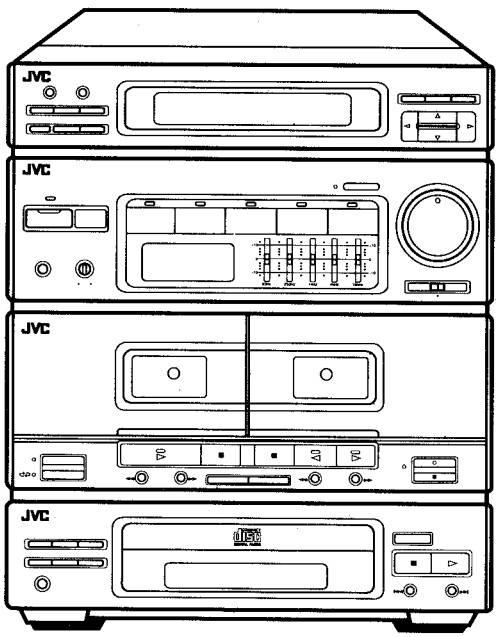
JVC

SERVICE MANUAL

STEREO RECEIVER

MODEL No. **CA-MX30BK**

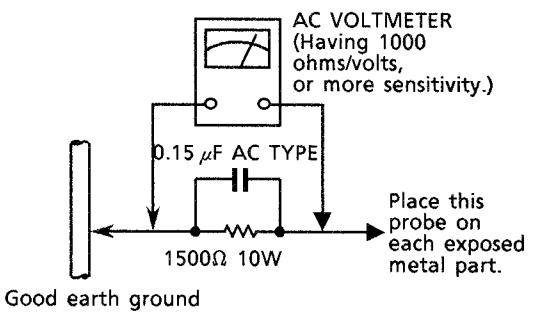




COMPACT disc DIGITAL AUDIO

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, contorl shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION : If safety switches malfunction, the laser is able to function.
6. CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
7. CAUTION : The compact disc player provides a laser diode of wavelength 780-790nm and optical output power typical 3mW at the laser diode.

VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

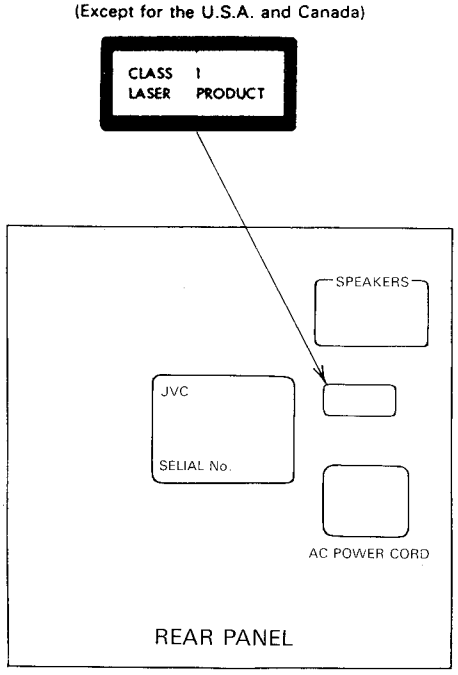
VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

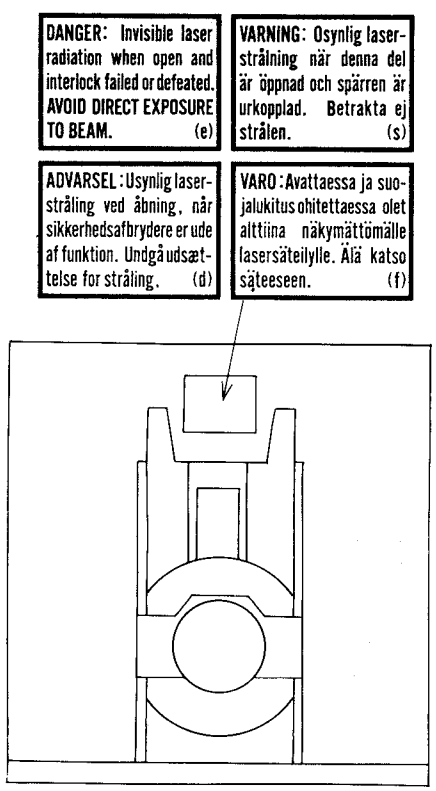
ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

CLASSIFICATION LABEL
(Except for the U.S.A. and Canada)



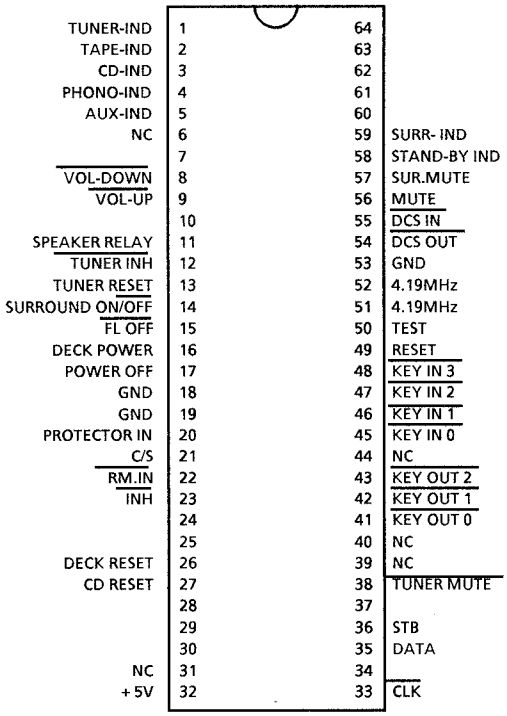
WARNING LABEL
(Except for the U.S.A.)


DANGER: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)
VARNING: Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)
ADVARSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (d)
VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)
FRONT SIDE

Description of Major LSIs

■ HD614043SA94 (IC621) : SYSTEM CONTROLLER

1. Terminal Layout



2. Key Matrix

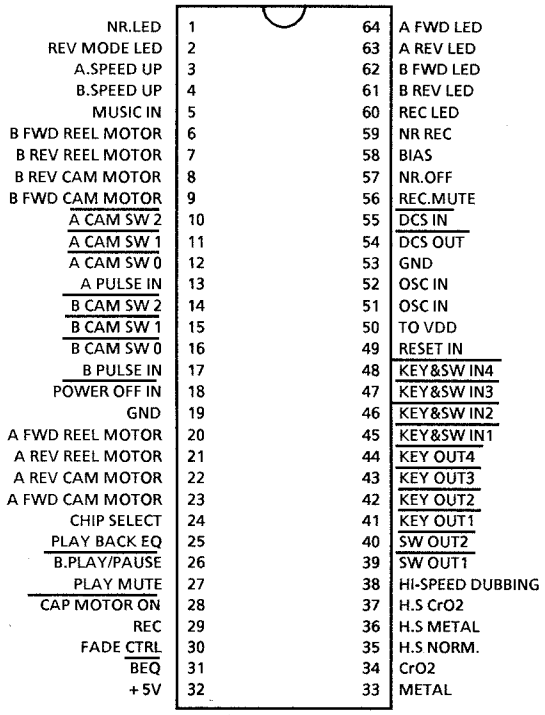
	KEYO 0 (41PIN)	KEYO 1 (42PIN)	KEYO 2 (43PIN)
KEYI 0 (45PIN)	—	—	CD
KEYI 1 (46PIN)	—	SURR	PHONO
KEYI 2 (47PIN)	—	TAPE	VIDEO/AUX
KEYI 3 (48PIN)	—	TUNER	POWER SW

3. Pin Function

Pin NO.	Symbol	I/O	Function and Operations	Pin NO.	Symbol	I/O	Function and Operations
1	TUNER-IND	O	TUNER Indicator output	33	CLK	O	System Clock output
2	TAPE-IND	O	TAPE Indicator output	34	—	-	Not used
3	CD-IND	O	CD Indicator output	35	DATA	O	Data output
4	PHONO-IND	O	PHONO Indicator output	36	STB	O	Strobe output
5	AUX-IND	O	VIDEO / AUX Indicator output	37	—	-	Not used
6	NC	-	Not used	38	TUNER MUTE	O	TUNER Mute signal
7	—	-	Not used	39	NC	-	Non connect
8	VOL-DOWN	O	Master Volum Down	40	NC	-	Non connect
9	VOL-UP	O	Master Volum Up	41	KEY OUT 0	O	Key matrix output
10	—	-	Not used	42	KEY OUT 1	O	Key matrix output
11	SP.RELAY	O	Speaker Relay Control	43	KEY OUT 2	O	Key matrix output
12	TUNER INH	O	TUNER INH output	44	NC	-	Non connect
13	TUNER RESET	O	TUNER RESET output	45	KEY IN 0	I	Key matrix input
14	SURR ON/OFF	O	Surround ON/OFF	46	KEY IN 1	I	Key matrix input
15	FL OFF	-	Not used	47	KEY IN 2	I	Key matrix input
16	DECK POWER	O	DECK POWER ON/OFF output	48	KEY IN 3	I	Key matrix input
17	POWER OFF	O	Power Control	49	RESET	I	Reset input
18	GND	-	Ground	50	TEST	-	Test input
19	GND	-	Ground	51	4.19MHz	O	X'tal oscilator output
20	PROTECTOR IN	I	Protector Signal input	52	4.19MHz	I	X'tal oscilator input
21	C/S	-	Non connect	53	GND	-	Ground
22	RM.IN	I	REMOCON input	54	DCS OUT	O	Conpulink output
23	INH	I	INH input	55	DCS IN	I	Conpulink input
24	—	-	Not used	56	MUTE	O	Mute output
25	—	-	Not used	57	SUR.MUTE	-	Not used
26	DECK RESET	O	DECK Reset output	58	STAND-BY IND	O	STAND-BY indicator output
27	CD RESET	O	CD Reset output	59	SURR- IND	O	Surround indicator output
28	—	-	Not used	60	—	-	Not used
29	—	-	Not used	61	—	-	Not used
30	—	-	Not used	62	—	-	Not used
31	NC	-	Non connect	63	—	-	Not used
32	+5V	-	Power supply	64	—	-	Not used

■ HD614081SC34(IC921) : DECK CONTROLLER

1. Terminal Layout



2. Key Matrix

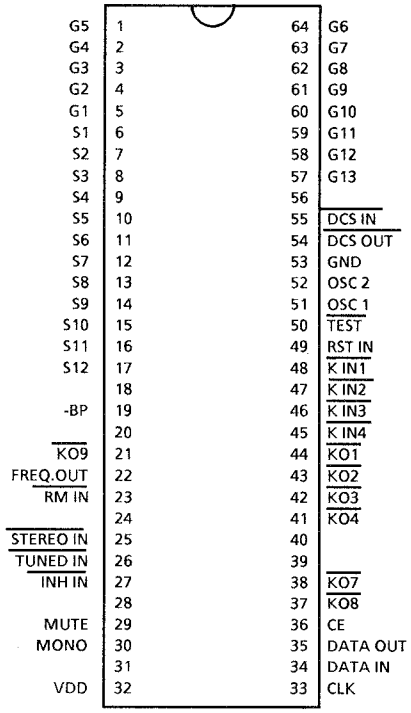
	KEYI 1 (45PIN)	KEYI 2 (46PIN)	KEYI 3 (47PIN)	KEYI 4 (48PIN)
KEYO 1 (41PIN)	—	A ◀◀	A ▶▶	A ▶
KEYO 2 (42PIN)	B ◀	B ◀◀	B ▶▶	B ▶
KEYO 3 (43PIN)	A ■	B ■	B ●	B ❚❚
KEYO 4 (44)PIN	A ▶▶ B	DOLBY	REV MODE	CD . REC
SWO 1 (39PIN)	A . CrO2	B . CrO2	—	—
SWO 2 (40PIN)	B PACK	REV REC	FWD REC	A PACK

3. Pin Function

Pin NO.	Symbol	I/O	Function and Operations	Pin NO.	Symbol	I/O	Function and Operations
1	NR.LED	O	NR indicator output	33	METAL	-	Not used
2	REV MODE LED	O	REV MODE indicator output	34	CrO2	O	"H" with normal speed and CrO2 position
3	A.SPEED UP	O	A deck Speed Control output	35	H.S NORM.	--	Not used
4	B.SPEED UP	O	B deck Speed Control output	36	H.S METAL	--	Not used
5	MUSIC IN	I	Music scan input	37	H.S CrO2	O	"H" with high speed and CrO2 position
6	B FWD REEL	O	B deck reel Motor FORWARD Control	38	HS DUBBING	O	High speed dubbing
7	B REV REEL	O	B deck reel Motor REVERSE Control	39	SWO1	I	CrO2 detect Switch input
8	B REV CAM	O	B deck CAM Motor REVERSE Control	40	SWO2	I	Pack detect Switch input
9	B FWD CAM	O	B deck CAM Motor FORWARD Control	41	KO1	O	Key matrix output
10	A CAM SW 2	I	A CAM SW input	42	KO2	O	Key matrix output
11	A CAM SW 1	I	A CAM SW input	43	KO3	O	Key matrix output
12	A CAM SW 0	I	A CAM SW input	44	KO4	O	Key matrix output
13	A PULSE IN	I	A deck reel pulse input	45	KI1	I	Key matrix input
14	B CAM SW 2	I	B CAM SW 2 input	46	KI2	I	Key matrix input
15	B CAM SW 1	I	B CAM SW 1 input	47	KI3	I	Key matrix input
16	B CAM SW 0	I	B CAM SW 0 input	48	KI4	I	Key matrix input
17	B PULSE IN	I	B deck reel pulse input	49	RESET IN	I	Reset input
18	POWER OFF IN	I	POWER OFF input	50	TO VDD	I	+5V
19	GND	--	Ground	51	OSC IN	I/O	Clock oscillation input
20	A FWD REEL	O	A deck reel Motor FORWARD Control	52	OSC IN	I/O	Clock oscillation output
21	A REV REEL	O	A deck reel Motor REVERSE Control	53	GND	--	Ground
22	A REV CAM	O	A deck CAM Motor REVERSE Control	54	DCS OUT	O	Conpulink output
23	A FWD CAM	O	A deck CAM Motor FORWARD Control	55	DCS IN	I	Conpulink input
24	CHIP SELECT	I	CHIP SELECT input : to VDD	56	REC.MUTE	O	Recording mute control signal output
25	PLAY BACK EQ	O	Play back EQ control output	57	NR.OFF	O	NR ON/OFF output
26	B.PLAY/PAUSE	O	B deck play/pause switching output	58	BIAS	O	BIAS Circuit ON
27	PLAY MUTE	O	Play Mute output	59	NR REC	O	Dolby IC PLAY/Recording Switching
28	CAP MO ON	O	Capstan motor control	60	REC LED	O	Recording indicator signal output
29	REC	O	Recording control	61	B REV LED	O	B REV indicator signal output
30	FADE CTRL	O	Fade control signal output	62	B FWD LED	O	B FWD indicator signal output
31	BEQ	O	B deck CrO2 switch OFF	63	NC	--	Non Connect
32	+5V	--	Power supply	64	A FWD LED	O	A FWD indicator signal output

■ HD614089SC35(IC501) : TUNER CONTROLLER

1. Terminal Layout



2. Key Matrix

	KEYO 1 (44PIN)	KEYO 2 (43PIN)	KEYO 3 (42PIN)	KEYO 4 (41PIN)	KEYO 7 (38PIN)
KEYI 1 (48PIN)	—	W-UP / SLEEP	UP	FM	—
KEYI 2 (47PIN)	TIMER1	CLOCK ADJ.	DOWN	AM	—
KEYI 3 (46PIN)	TIMER2	CANCEL	PRESET UP	FM MODE/MUTE	—
KEYI 4 (45PIN)	DAILY	MEMORY	PRESET DOWN	—	AUTO MEMORY

3. Pin Function

PIN NO.	Symbol	I/O	Functions and Operations	PIN NO.	Symbol	I/O	Functions and Operations
1	G5	O	FL grid control output.	33	CLK	O	Clock output.
2	G4	O	FL grid control output.	34	DATA IN	I	To DATA out (IC102).
3	G3	O	FL grid control output.	35	DATA OUT	O	To DATA in (IC102).
4	G2	O	FL grid control output.	36	CE	O	Chip Enable output (IC102).
5	G1	O	FL grid control output.	37	KO8	O	Key matrix output.
6	S1	O	FL segment control output.	38	KO7	O	Key matrix output.
7	S2	O	FL segment control output.	39	—	--	Not used.
8	S3	O	FL segment control output.	40	—	--	Not used.
9	S4	O	FL segment control output.	41	KO4	O	Key matrix output.
10	S5	O	FL segment control output.	42	KO3	O	Key matrix output.
11	S6	O	FL segment control output.	43	KO2	O	Key matrix output.
12	S7	O	FL segment control output.	44	KO1	O	Key matrix output.
13	S8	O	FL segment control output.	45	K IN4	I	Key matrix input.
14	S9	O	FL segment control output.	46	K IN3	I	Key matrix input.
15	S10	O	FL segment control output.	47	K IN2	I	Key matrix input.
16	S11	O	FL segment control output.	48	K IN1	I	Key matrix input.
17	S12	O	FL segment control output.	49	RST IN	I	Reset input.
18	—	--	Not used.	50	TEST	I	Test input.
19	-BP	--	FL Dissplay Power supply.	51	OSC 1	O	X'tal oscilator output.
20	—	--	Not used.	52	OSC 2	I	X'tal oscilator input.
21	KO9	O	Key matrix output.	53	GND	--	Ground.
22	FREQ.OUT	O	Frequency output.	54	DCS OUT	O	Conpulink output.
23	RM IN	I	Remote control input.	55	DCS IN	!	Conpulink input.
24	—	--	To GND.	56	—	--	Not used.
25	STEREO IN	I	STEREO Indicator input.	57	G13	O	FL grid control output.
26	TUNED IN	I	TUNED Indicator input.	58	G12	O	FL grid control output.
27	INH IN	I	INH input.	59	G11	O	FL grid control output.
28	—	--	Not used.	60	G10	O	FL grid control output.
29	MUTE	O	MUTE output.	61	G9	O	FL grid control output.
30	MONO	O	STEREO / MONO output.	62	G8	O	FL grid control output.
31	—	--	Not used.	63	G7	O	FL grid control output.
32	VDD	--	Power supply. (+5V)	64	G6	O	FL grid control output.

■ LC7218 (IC102): PLL Synthesizer

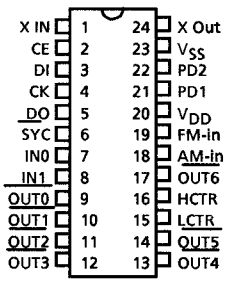
1. The main function descriptions

(1) It makes the local oscillation frequency by the control data from IC .

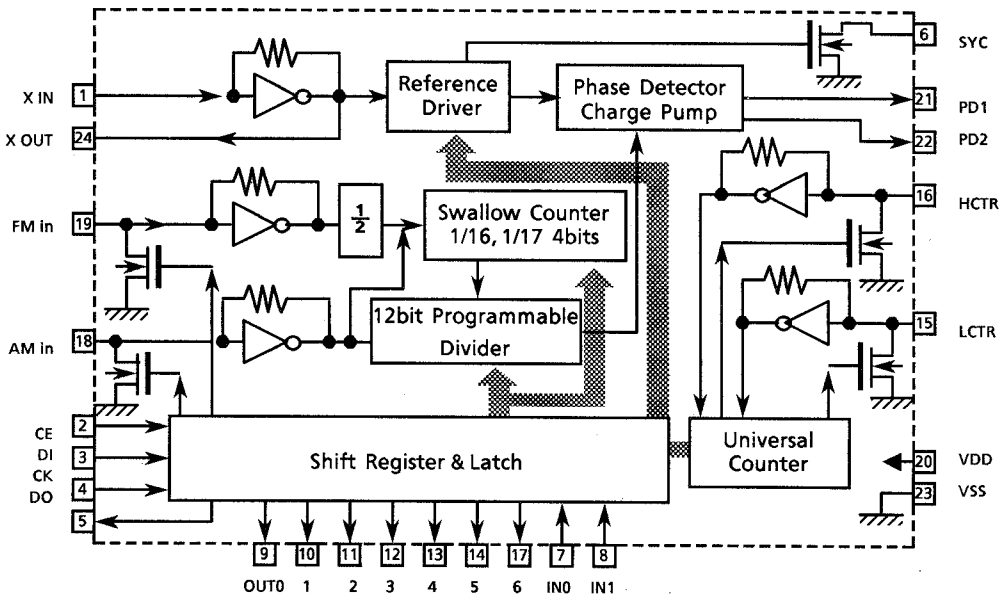
(2) Decode the control signal and transmit the signal for receiving conditions.

(3) For the best tuning, count the internal-frequency and transmit the data to IC .

2. Terminal Layout



3. Block Diagram



4. Pin Function Description

Pin No.	Symbol	Name	I/O	Functions and Operations
1, 24	X in, X out	X in, X out	I/O	Crystal oscillator (7.2MHz).
2	CE	CE	I	Fix the chip enable to "H" when inputting (DI) and outputting (DO) the serial data.
3	DI	DI	I	Receive the control data from the controller (IC421).
4	CK	CK	I	This clock is used to synchronize data when transmitting the data of DI and DO.
5	DO	DO	O	Transmit the data from LC7218 to the controller which is synchronized with CK.
6	SYC	SYC	—	Not use
7	IN0	Tuned in	I	Receive the tuned signal from IC101 (LA1266A).
8	IN1	Stop in	I	Not use
9	OUT 0	POWER	---	Not use
10	OUT 1	QSC	---	Not use
11	OUT2	MONO	---	MONO
12	OUT3	FM	O	It is "L" on FM mode.
13	OUT4	MW	O	It is "L" on AM mode.
14	OUT5	LW	—	Not use
15	LCTR	AM-IF	I	Universal counter input for AM-IF from IC101 (LA1266A).
16	HCTR	FM-IF	I	Universal counter input for FM-IF from IC101(LA1266A).
17	OUT6	IF REQ	O	Output the "IF-signal request" to IC101 when the pin-7 (tuned in) goes to "H".
18	AM in	AM osc	I	Input the local oscillator signal of AM.
19	FM in	FM osc	I	Input the local oscillator signal of FM.
20	V_{DD}	V_{DD}	—	This is a terminal of power supply.
21	PD1	PD1	O	PLL charge pump output : When the local oscillator signal frequency is higher than the reference frequency, high level signals will output. When it is lower than the reference frequency, low level signals will output. When it is same as reference frequency signals, it will be floating.
22	PD2	PD2	O	Not use
23	Vss	Vss	—	GND

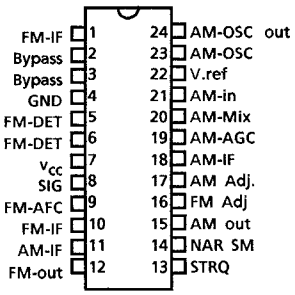
■ LA1266A (IC104) : FM AM IF AMP & detector

1. The main function descriptions

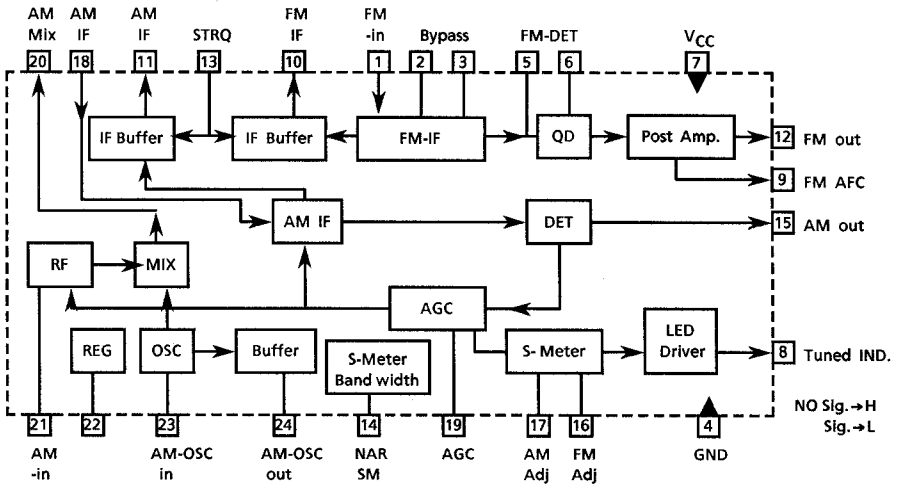
(1) Amplify and detect of FM intermodulation frequencies.

(2) It has local oscillator and mixer for AM, and amplify the AM-IF signal.

2. Top View



3. Block Diagram



4. Pin Function Description

Pin No.	Symbol	I/O	Functions and Operations
1	FM IF	I	This is an input terminal of FM IF Signal.
2, 3	Bypass		Bypass of FM IF Amp.
4	GND	---	This is the device ground terminal.
5, 6	FM DET	I	FM detect transformer.
7	V_{CC}	---	This is the power supply terminal.
8	SIGNAL	O	Mute drive and signal stop drive output when tuning. Active Low
9	FM AFC	O	This is an output terminal of voltage for FM - AFC.
10	FM IF	O	When the IF REQ signal of IC251(LC7218) applies to pin13, the signal of FM IF outputs.
11	AM IF	O	When the IF REQ signal of IC251(LC7218) applies to pin13, the signal of AM IF outputs.
12	FM out	O	FM detection output.
13	STRQ	I	The IF-signals come out from pin10 (FM-IF) or pin11 (AM-IF) while this terminal goes to "High".
14	NAR SM	O	Control the Band-width of AM signal meter.
15	AM out	O	AM detection output.
16	FM Adj	I	For adjust the stop level (or mute level) of FM.
17	AM Adj	I	For adjust the stop level (or mute level) of AM.
18	AM-IF	I	Input of AM IF Signal.
19	AM-AGC	I	This is an AGC voltage Input terminal for AM.
20	AM-MIX	O	This is an output terminal for AM mixer.
21	AM-IN	I	This is an input terminal for AM RF Signal.
22	V.REF	O	Control the Band-width of FM signal meter.
23	AM-OSC	I	This is a terminal of AM Local oscillation circuit.
24	AM-OSC out	O	AM Local Oscillation Signal output.

■ LA3401 (IC105): FM MPX Detector

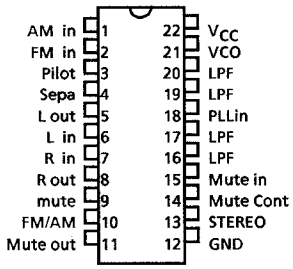
1. The main function descriptions

(1) Detect the FM Multiplex Signal (Stereo signal).

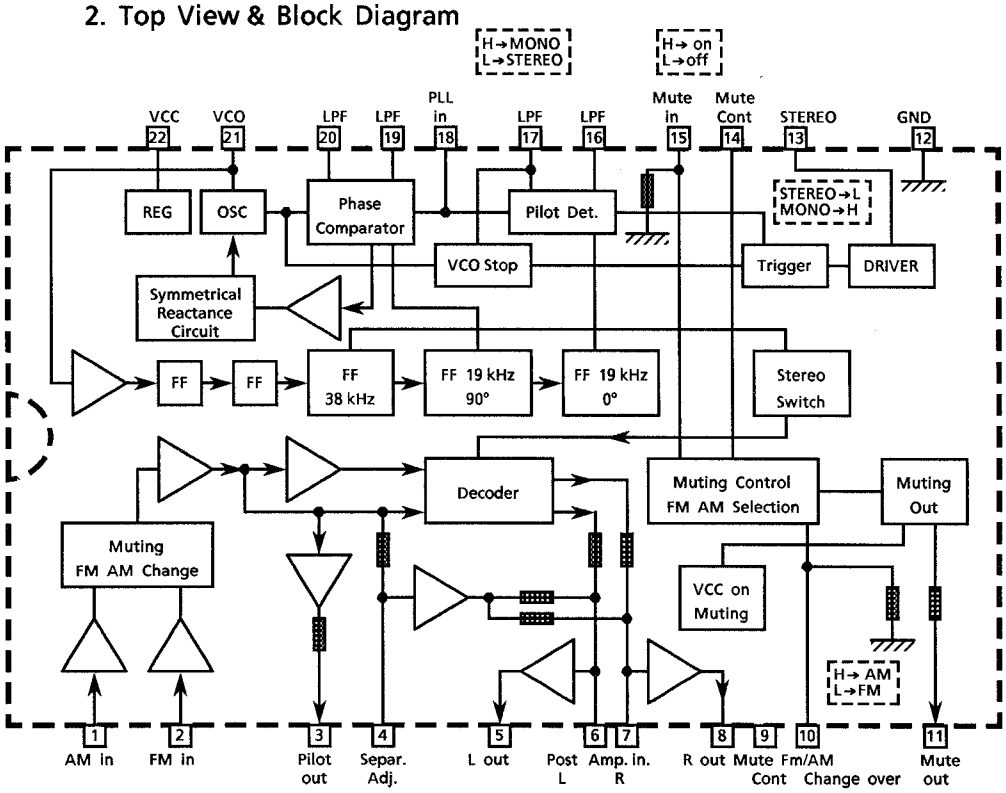
(2) When receiving FM Stereo Signal, it outputs the signal for indicator.

(3) AM/FM Audio Amplifier.

(1) Terminal Layout



2. Top View & Block Diagram

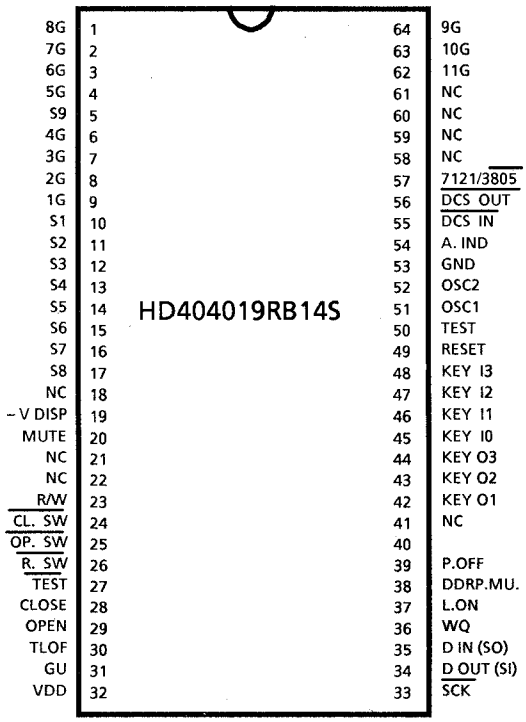


3. Pin Function Description

Pin No.	Symbol	I/O	Functions and Operations
1	AM in	I	This is an input terminal for AM detection signal.
2	FM in	I	This is an input terminal for FM detection signal.
3	Pilot out	O	Output of MPX pilot signal (Connect to Pin18).
4	Sepa. Adj.	O	Separation adjustment.
5	L. out	O	Left channel signal output.
6	L	O	Reversal output of Pin5.
7	R	O	Reversal output of Pin8.
8	R out	O	Right channel signal output
9	Mute Cont	O	The mute time is controlled by the connected capacitor when turning the power switch on.
10	FM/AM	I	Change over the FM/AM input. "H" : AM, "L" : FM
11	Mute out	---	Not use
12	GND	---	Ground terminal.
13	Stereo	O	Stereo indicator output. Stereo : "L", Mono : "H"
14	Mute Cont	O	The mute time is controlled by the connected capacitor when changing over the FM/AM .
15	Mute in	I	MutE signal input. "H" : Mute on, "L" : Mute off.
16	LPF		Low pass filter of pilot detector.
17	LPF		While this terminal goes to "H", the VCO stop.
18	Pilot in	I	PLL input.
19	LPF		Low-pass filter of PLL.
20	LPF		Low-pass filter of PLL.
21	VCO	O	Voltage controlled oscillator terminal.
22	V_{CC}	---	Power supply.

■ HD404019RB14S(IC901) : CD CONTROLLER

1. Terminal Layout



2. Key Matrix

	KEY I0 (45PIN)	KEY I1 (46PIN)	KEY I2 (47PIN)	KEY I3 (48PIN)
KEY O1 (42PIN)	STOP / CLEAR	⏭	PLAY / PAUSE	OPEN / CLOSE
KEY O2 (43PIN)	DISPLAY	A.EDIT	⏮	FADE
KEY O3 (44PIN)	REPEAT ALL / 1	SIDE A/B	—	RANDOM

3. Pin Function

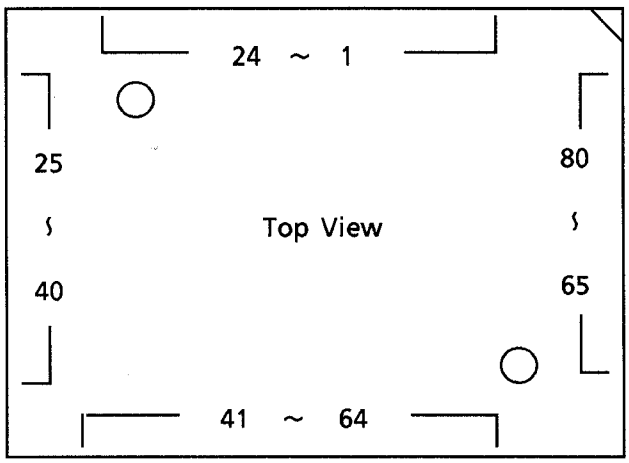
PIN NO.	Symbol	I/O	Functions and Operations	PIN NO.	Symbol	I/O	Functions and Operations
1	8G	O	FL grid control output	33	SCK	O	Clock output for data transfers
2	7G	O	FL grid control output	34	SI	O	Serial data output
3	6G	O	FL grid control output	35	SO	I	Serial data input
4	5G	O	FL grid control output	36	WQ	I	Write request input
5	S9	O	FL segment control output	37	L.ON	O	Laser ON output
6	4G	O	FL grid control output	38	DDRP.MU	--	Not used
7	3G	O	FL grid control output	39	P.OFF	O	Power supply off output
8	2G	O	FL grid control output	40	—	--	Not used
9	1G	O	FL grid control output	41	NC	--	Non connect
10	S1	O	FL segment control output	42	KEY01	O	Key matrix output
11	S2	O	FL segment control output	43	KEYO2	O	Key matrix output
12	S3	O	FL segment control output	44	KEYO3	O	Key matrix output
13	S4	O	FL segment control output	45	KEY I0	I	Key matrix input
14	S5	O	FL segment control output	46	KEY I1	I	Key matrix input
15	S6	O	FL segment control output	47	KEY I2	I	Key matrix input
16	S7	O	FL segment control output	48	KEY I3	I	Key matrix input
17	S8	O	FL segment control output	49	RESET	I	Reset input
18	NC	--	Non connect	50	$\overline{\text{TEST}}$	--	Pull Up (+5V)
19	– V DISP	I	FL Power supply	51	OSC 1	I	Clock Oscillation input
20	MUTE	--	Mute signal output	52	OSC 2	O	Clock Oscillation output
21	NC	--	Non connect	53	GND	--	Ground
22	NC	--	Non connect	54	A. IND	--	Not used
23	R / W	O	Reed / Light output	55	DCS IN	I	Compu-link signal input
24	CL. SW	I	Close signal input	56	DCS OUT	O	Compu-link signal output
25	OP. SW	I	Open signal input	57	7121/$\overline{3805}$	--	IC Select : To GND
26	R. SW	I	REST Switch input	58	NC	--	Non connect
27	TEST	--	Pull Up (+5V)	59	NC	--	Non connect
28	CLOSE	O	TRAY Close signal output	60	NC	--	Non connect
29	OPEN	O	TRAY Open signal output	61	NC	--	Non connect
30	TLOF	O	Tracking servo off	62	11G	O	FL grid control output
31	GU	O	Increases tracking gain	63	10G	O	FL grid control output
32	VDD	--	Power supply	64	9G	O	FL grid control output

■ YM3805-H (IC841)

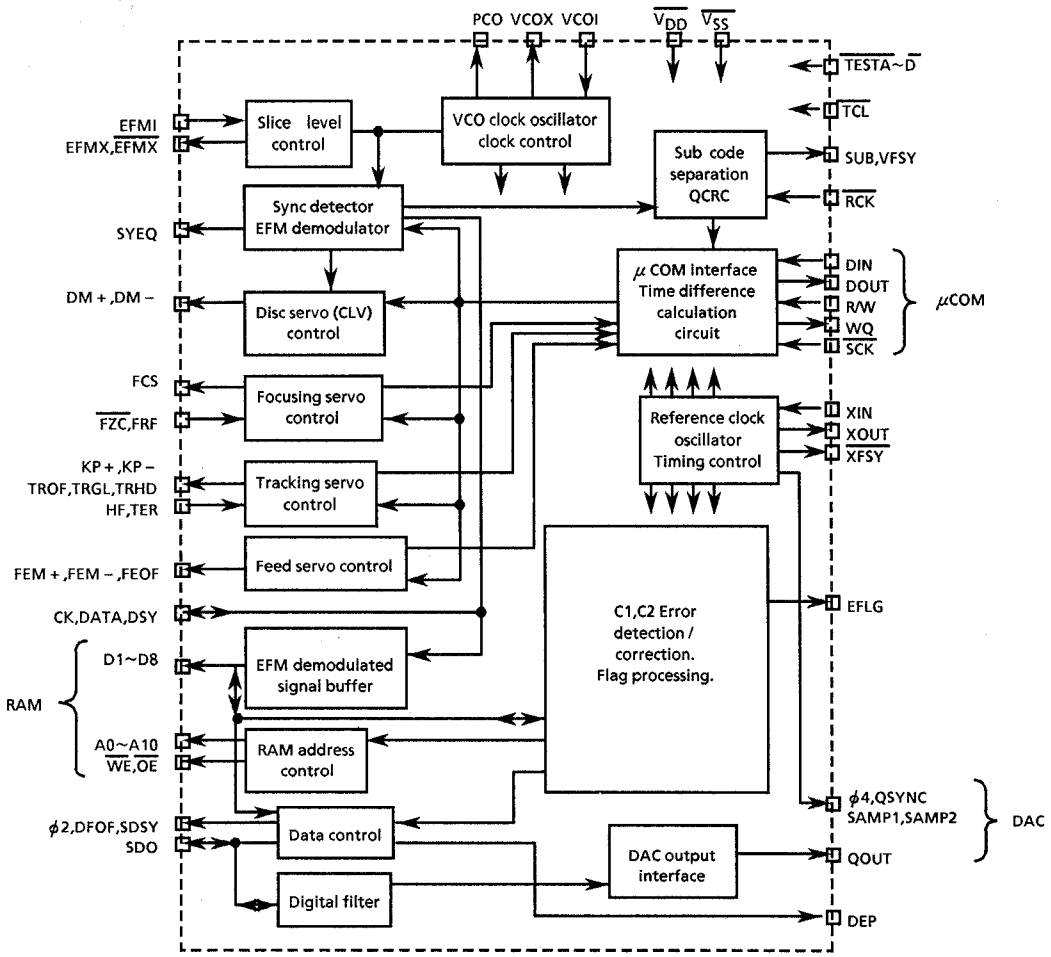
1. Outline:

YM3805-H is a C-MOS LSI for signal processing (SGP) and servo control (SVC) in a CD player. It is used for the demodulation of the EFM signal from the laser pickup, detection / correction of the error signal, signal processing in digital filtering, etc. and for various servo controls (focusing, tracking, spindle and feed servos).

2. Terminal Layout



3. Internal Block Diagram

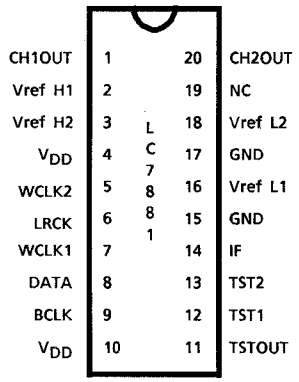


4. Pin Functions Description

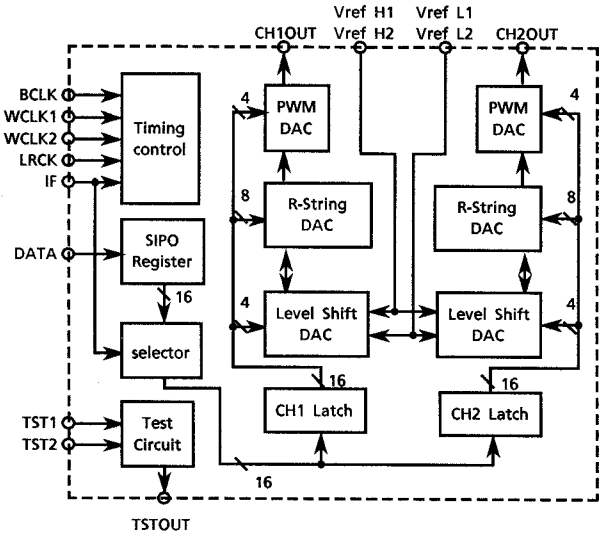
Pin No.	Symbol	I/O	Functions and Operations
1 32 72	V_{DD}	–	These are +5V power supply terminals.
2 · 3	VCOX VCOI	O I	These terminals are used for oscillating VCO (Voltage Controlled Oscillator) clock. (8.6436MHz)
4	PCO	O	This terminal is control output terminal for VCO clock, and sets oscillation circuit to rise frequency when average voltage is high.
5 · 9 41 · 78	V_{SS}	–	These are ground terminals.
6 7	$\overline{EFMX}$ $\overline{EFMX}$	O O	These terminals connect with EFM signal slice level control circuit. Amplified EFM signal by limited amplitude comes from these terminals.
8	EFMI	I	Input the EFM signal (1~2Vpp) to the this terminal.
10	SYEQ	O	This is a monitor output terminal. It becomes "H" when there is a agreement synchronizing signal in EFM signal and inner counter.
11 12	DM+ DM–	O O	They are output terminals controlling disc motor drive circuit. These do not become "H" at the same time.
13 14 15	$\overline{FCS}$ $\overline{FZC}$ FRF	O I I	This is an output terminal for taking in focus. This is a terminal to get FZC signal which changing "H" to "L" when pick-up is in focus. Input "H" signal when there is reflected light of compact disc at this terminal.
16 17 19 20 21 22 23	HF TER TROF TRGL TRHD KP+ KP–	I I O O O O O	This is a terminal inputting envelope of EFM. This is a terminal inputting tracking error signal. This is a terminal for cutting off the tracking error signal of tracking servo circuit. This is an output terminal for getting down the gain of tracking servo circuit. This is an output terminal for holding tracking error signal of tracking servo circuit while following KP+ or KP– are output. They are connected with tracking servo circuit. They are terminals for searching.
24 25 26	FEOF FEM+ FEM–	O O O	This is an output terminal for cutting off the input signal of feed servo circuit. There are output signals for high speed feed and they are connected with feed servo circuit.
27	CK	I/O	This is the check terminal. It has a 4.3218MHz; half of VCO.
35	WQ	O	This connects with microcomputer. It is a request output terminal for demanding to send the data from SVC to microcomputer.
36	R/W	I	This connects with microcomputer and it is an output terminal for switching data transmission mode. It enables to transmit data from SVC to microcomputer when R/W is "L" and from microcomputer to SVC when R/W is "H". (Read /Write)
37	DOUT	O	This is a data output terminal. It enables to transmit the data from SVC to microcomputer according SCK clock input when R/W is "L".
38	DIN	I	This is a data input terminal. It enables to transmit the data from microcomputer to SVC according SCK clock input when R/W is "H".
39	$\overline{SCK}$	I	It is a clock input terminal needed for transmitting the data.
40 42~50 53	A0 A1~A9 A10	O	These are address output terminals and are connected to the RAM.
51	$\overline{WE}$	O	This terminal is connected to the RAM; the RAM is set to the write mode when this terminal is "L". (Write enable)
52	$\overline{OE}$	O	This terminal is connected to the RAM; the RAM is set to the read mode when this terminal is "L". (Output enable)
54~61	D8~D1	I/O	These are data Input and Output terminals and are connected to the RAM.
62	DEP	O	This terminal a Flag for de-emphasis. De-emphasis is necessary when this terminal is "H".
64 65 68	QSYNC QOUT Φ4	I/O O O	This terminal output the clock signals to find that the serial data is channel 1 or channel 2. This terminal output the digitarized audio signal. they come out channel 1 and channel 2 alternately. Φ4 is a 4.3218MHz crystal clock.
76 77	SAMP1 SAMP2	O O	These terminals connect with D/A converter. These signal are use to make degliching signal.
79 80	XIN XOUT	I O	A crystal resonator (8.6436MHz) is connected.
18 28~31 33 · 34 63 66 · 67 69~71 73~75			Not used.

■ LC7881-C (IC873): D/A converter

1. Terminal Layout



2. Block Diagram

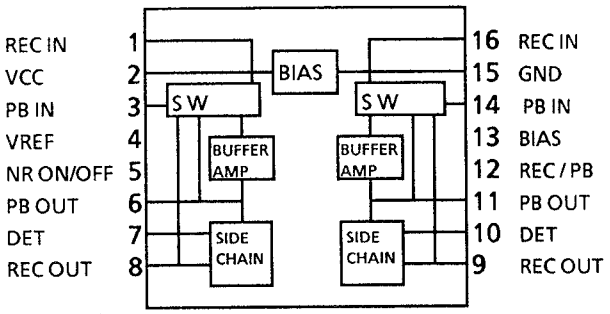


3. Pin Functions

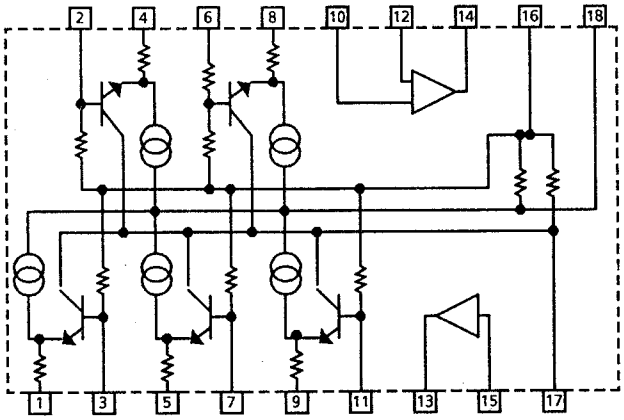
Pin No	Symbol	I/O	Functions and Operations
1	CH1 OUT	O	Channel 1 Output pin.
2	Vref H1	I	Reference voltage "H" input pin1.
3	Vref H2	I	Reference voltage "H" input pin2.
4	V_{DD}	—	Power supply, +5V.
5	WCLK2	I	Word clock 2 input pin. When IF pin is at high level, WCLK2 pin should be set at low level. When IF pin is at low level, this generates the internal signal used to latch the CH1 data of the digital audio signal, using the falling edge of WCLK2.
6	LRCK	I	LR clock input pin. This shows the CH1 and CH2 of the input digital audio data. When LRCK is at high level, it corresponds to CH1 data. When LRCK is at low level, it corresponds to CH2 data.
7	WCLK1	I	Word clock 1 input pin. When IF pin is at high level, this pin generates the internal signal used to latch both the CH1 and CH2 data, using the falling edge of WCLK1. When IF pin is at low level, it generates the internal signal used to latch the CH2 data.
8	DATA	I	Digital audio data input pin. When IF pin is at high level, the data signal is input by each bit serially from the MSB. When IF pin is at low level, the data signal is input by each bit serially from the LSB.
9	BCLK	I	Bit clock pin. This clock signal is used when reading the digital audio data by each bit serially, and also used for PWM D/A converter.
10	V_{DD}		Power supply, +5V.
11	TST OUT	O	Test signal output pin. Normally leave this pin open.
12 13	TST1 TST2	I	Test signal input pin. Normally connect to GND terminal.
14	IF	I	Interface select pin. When IF pin is at high level, the digital audio data is input from the MSB first. When IF pin is at low level, the digital audio data is input from the LSB first.
15	GND	—	Ground.
16	Vref L1	I	Reference voltage "L" input pin1.
17	GND	—	Ground.
18	Vref L2	I	Reference voltage "L" input pin2.
19	NC	—	No connection.
20	CH2 OUT	O	Channel 2 output pin.

Internal Block of Others ICs

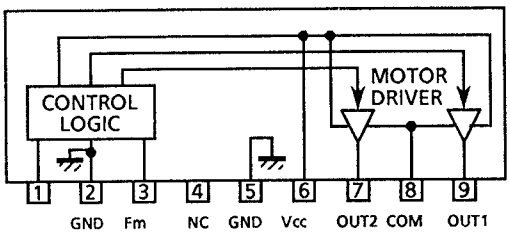
■HA12136A (IC351) :Noise Reduction Amplifier



■BA3812L (IC651, 652) :SEA Equalizer Amplifier



■BA6218(IC931~934):Moter Drive IC

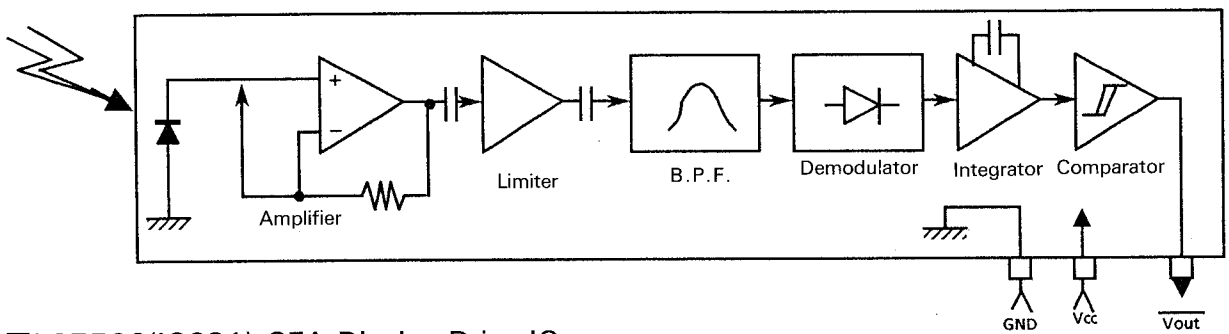


● Input Truth Table

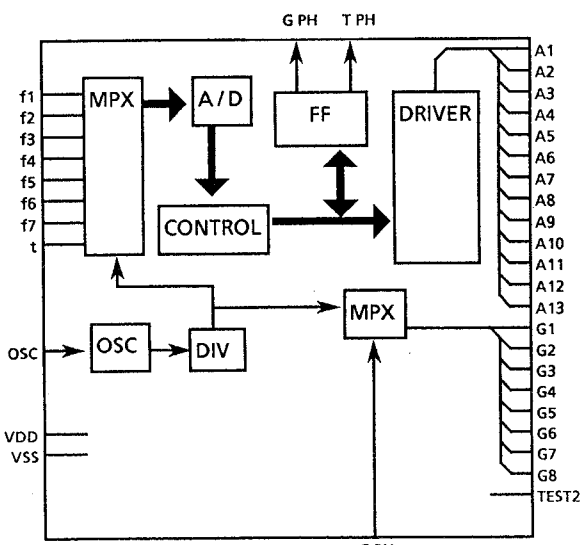
3pin (IN)	1pin (IN)	7pin (OUT)	9pin (OUT)
H	L	H	L
L	H	L	H
H	H	L	L
L	L	OPEN	OPEN

Note:The input level "H" must be 2.0V or higher and the input level "L" must be 0.8V or lower.

■SPS-420-1(IC623):Remote Control Receiving IC



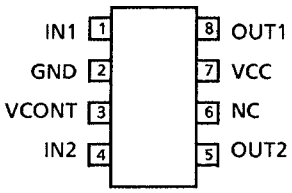
■LC7566(IC631):SEA Display Drive IC



Explanation of Terminals

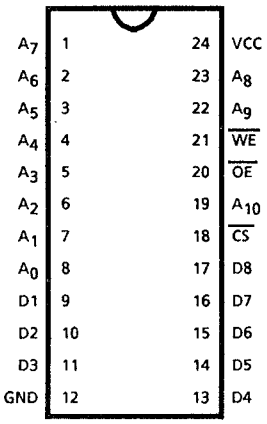
Pin no.	Terminal Name	Function
1,23	TEST1,TEST2	Test Terminal
2~14	A1~A13	Anode Noise Terminal
15~18,33	NC	Not Connected
24 25~31	T f7~f1	Rectified Voltage Input of Audio Signal
34~41	G8~G1	Grid Noise
42	VDD	Power Supply
19	VSS	GND
21	G.PH	Peak Holding Reset Time Setting
22	T.PH	Total Display Reset Time Setting
32	DIM	Dimmer Control (Dimmer Turned on 1 and off at 0)
20	OSC	Oacillation Terminal

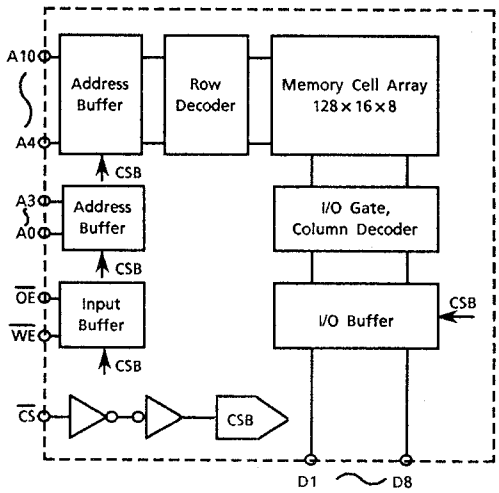
■LB1639-CV(IC622):Motor Driver



IN 1	IN 2	OUT 1	OUT 2	MOTOR
H	L	H	L	Clockwise
L	H	L	H	Counterclockwise
H	H	OFF	OFF	Wait
L	L	OFF	OFF	Wait

■LC3517BS-15(IC842):Static RAM

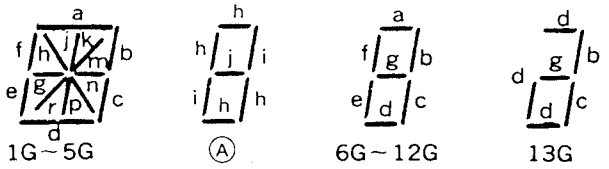


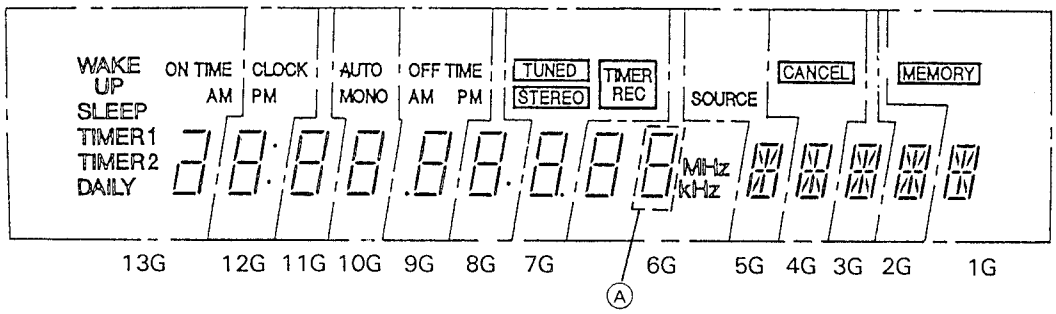


Internal Connections for the FL Display Tube

■ FL501 : ELU0001-101

(1) Grid Division





(2) Terminal Connections

PIN CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
CONNECTION	F1	F1	NP	NC	13G	S1	S2	13G	S3	S4	12G	12G	S5	11G	S6	10G	S7	9G	9G	S8	S9	8G	S10	7G	S11	6G	S12	NC	NC	NC

PIN NO.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
CONNECTION	6G	NC	5G	NC	4G	4G	NC	3G	NC	2G	NC	1G	NC	NP	F2	F2

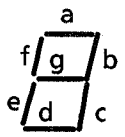
Notes F: Filament G: Grid P: Anode NP: No Pin NC: No Connection

(3) Anode Connection Table

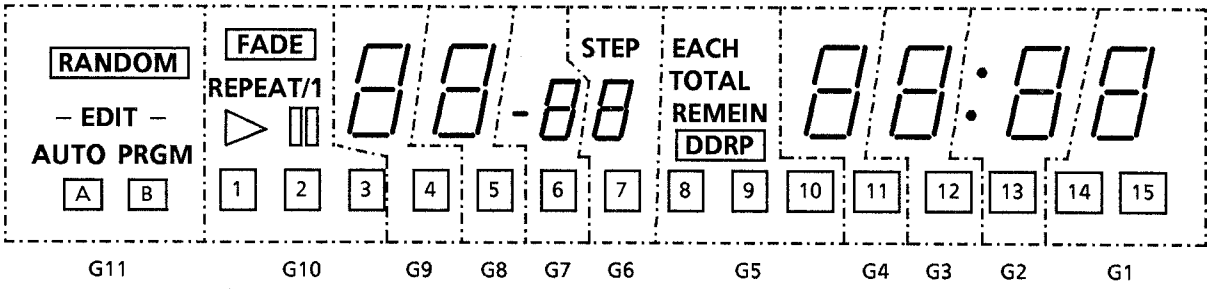
Inside Connections

	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	d	d	d	d	d	d	d	d	d	d	d	d	d
S2		e	e	e	e	e	e	e	e	e	e	e	e
S3	c	c	c	c	c	c	c	c	c	c	c	c	c
S4	g							kHz	r	r	r	r	m
S5	b	DP (:)			DP (.)	DP (:)	DP (.)	MHz	k	n	n	n	n
S6	DAILY				AM		STEREO	i	j, p	j, p	j, p	j, p	j, p
S7	TIMER 2	g	g	g	g	g	g	g	g, m	g, m	g, m	g, m	g
S8	TIMER 1	f	f	f	f	f	f	f	f	f	f	f	f
S9	SLEEP	b	b	b	b	b	b	b	b	b	b	b	b
S10	WAKE UP	a	a	a	a	a	a	a	a	a	a	a	a
S11	AM	PM		MONO	PM		TUNED	j	h	h	h	h	h, k
S12	ON TIME	CLOCK		AUTO	OFF TIME		TIMER REC	h	SOURCE	CANCEL	k	k	MEMORY

■ ELU0001-114 (FL901) : FL DISPLAY FOR CD



1.Grid Layout



2.Pin Functions

Terminal No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ELECTRODE	F	F	NP	NC	11G	10G	9G	8G	7G	6G	5G	P1	4G	3G	2G	1G	P2	P3	P4

Terminal No	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
ELECTRODE	P5	P6	P7	P8	P9	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NP	F	F

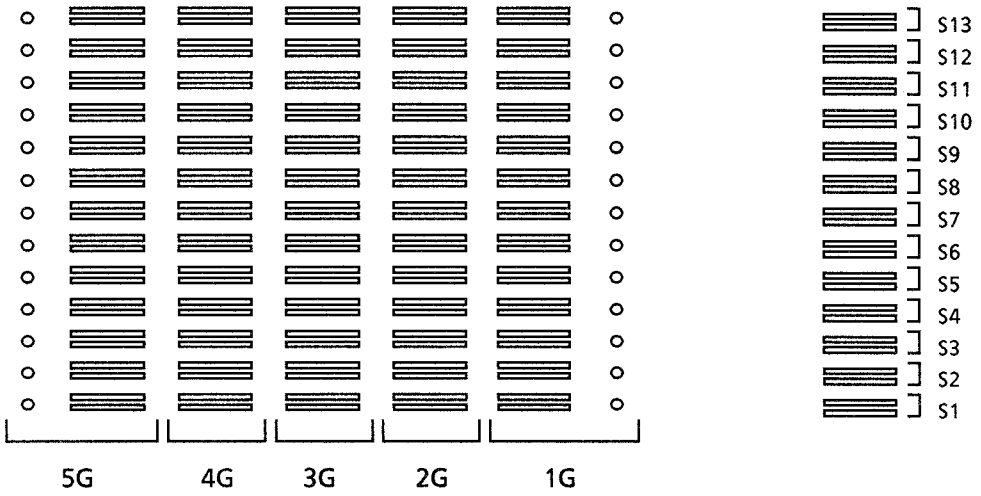
注) F: Filament NP:No Pin
G: Grid NC:No Connection
P: Anode

3.Anode Connection Tables

	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	–EDIT–	II	a	a	a	a	EACH	a	a	a	a
S2	AUTO	FADE	b	b	b	b	TOTAL	b	b	b	b
S3	PRGM		f	f	f	f	REMAIN	f	f	f	f
S4	B	REPEAT	g	g	g	g	DDRP	g	g	g	g
S5	A	1	c	c	c	c	10	c	c	c	c
S6	RANDOM	1	e	e	e	e	9	e	e	e	e
S7		2	d	d	d	d	8	d	d	d	d
S8		3	4	5	6	7		11	12	13	14
S9		▶			-	STEP				° °	15

■ ELU0001-117 (FL631) : FL DISPLAY FOR SPECTRO PEEK INDICATOR

1. Grid Layout



2. Pin Functions

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
CONNECTION	F1	F1	S1	S2	5G	S3	S4	S5	4G	S6	S7	3G	S8	S9	2G	S10	S11	1G	S12	S13	F2	F2

【 CAUSION 】 F : Filament S : Segment G : Grid

Disassembly procedures

1. How to remove the top cover
(1) Remove the four screws on the rear side and the other two screws on the both sides.
(2) Remove the top cover.

2. How to remove the rear panel
(1) Remove the top cover.
(2) Remove the 13 screws.
(3) Remove the rear panel.

3. How to remove the tuner board (ENA-116)
(1) Remove the top cover.
(2) Remove the rear panel (without fail).
(3) Remove the plastic rivet , then disconnect the connectors JB103 and JB104 from the board, then remove the board.

4. How to remove the source selector board (ENN-279-6)
(1) Remove the top cover.
(2) Remove the rear panel.
(3) Disconnect the connector (JA501) from the board, then remove the board.

5. How to remove the CD tray
(1) Remove the top cover and the rear panel.
(2) Rotate the screw Ⓐ under the front panel, to the direction of the arrow.
(3) Remove the rear panel, then remove the stopper screw Ⓓ, then pull out the tray to front side.

6. How to remove the front panel assembly
(1) Remove the top cover.
(2) Remove the mixing level knob and volume control knob.
(3) Remove the fixing nut of the volume control knob, then remove ENC-088-4.
(4) Remove the fitting in front of the tray. (Unlatch the pawls under the fitting, then remove the fitting upward.)
(5) Remove the two screws on each side of the front panel and four screws Ⓑ under the panel.
(6) Remove the front panel assembly from the chassis and disconnect the connectors at the same time.

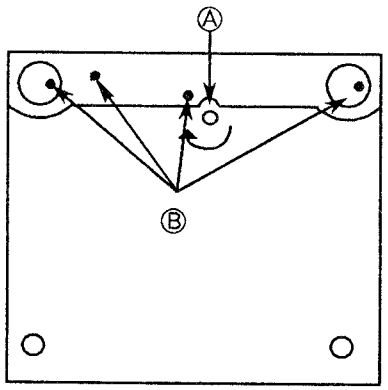
7. How to remove the main circuit board (ENJ-049-1)
(1) Remove the top cover.
(2) Remove the rear panel.
(3) Remove the six screws from the main circuit board.
(4) Lift the main circuit board a little and remove it by pulling toward the rear panel.
(5) If necessary, remove the wires.

8. How to remove the CD mechanism assembly
(1) Remove the front panel assembly.
(2) Disconnect the connectors (P701 and P702).
(3) Remove the two screws Ⓔ fastening the clamper assembly, then remove the clamper assembly.
(4) Remove the three screws Ⓕ fastening the mechanical assembly.
(5) Remove the mechanism assembly.

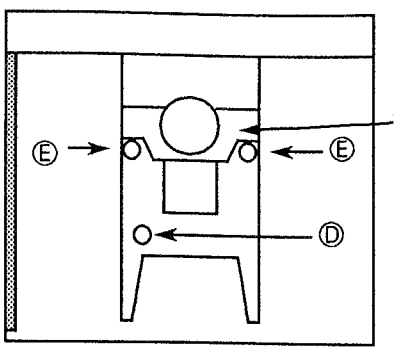
9. How to remove the system front board (ENC-088-1)
(1) Remove the top cover.
(2) Remove the front panel assembly.
(3) Remove the 13 screws fastening the board, then remove the board.

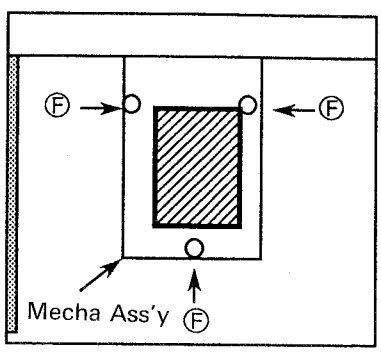
10. How to remove the CD front board (ENN-278-9)
(1) Remove the top cover.
(2) Remove the front panel.
(3) Remove the 5 screws fastening the board, then remove the board.

11. How to remove the cassette mechanism assembly (including the microcomputer board)
(1) Remove the top cover.
(2) Remove the front panel assembly.
(3) Disconnect the flat wires J943 and J944.
(4) Remove the 8 screws (blue).
(5) Open the cassette door and remove the cassette mechanism assembly (Both A and B mechanisms are Jointed to each other by the bracket).



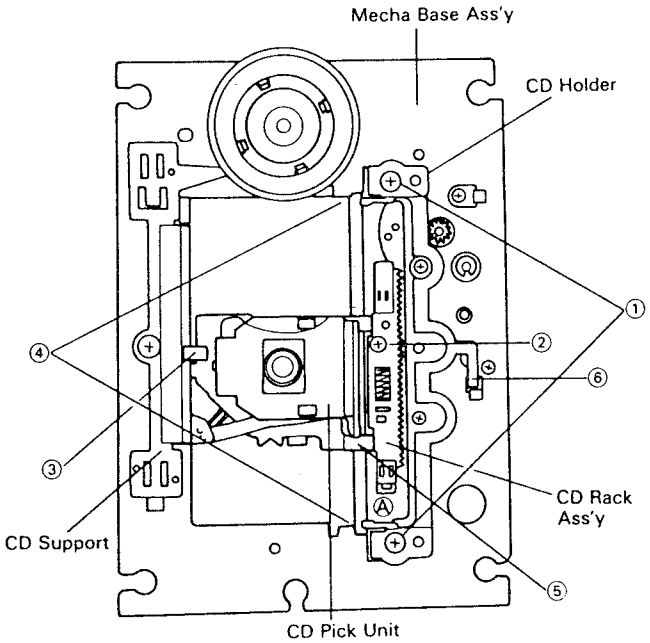
Bottom Side





12. Removing the Laser Pickup

(1) Remove the top cover, tray assembly and the clamp.
(2) Move the Pickup Unit from rest position to the center pushing ⑤ point with finger.
(3) Remove the screw ② from the CD RACK assembly, and remove the CD RACK assembly.
(4) Remove the screw① from the mechanical base assembly.
(5) Remove the CD HOLDER fastening the shaft from the mechanical base assembly.(Release the hook ⑥)
(6) Remove the CD Pick Unit with the shaft.

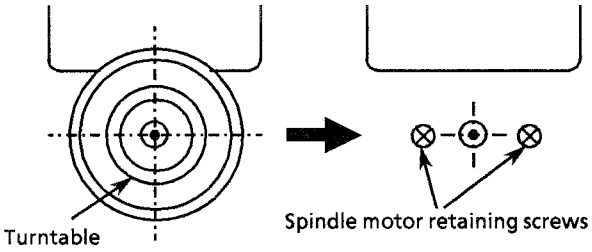


13. Laser Pickup installation

(1) Connect two wires with the connectors of P.C.Board.
(2) While installing the ③ in the CD Support, set the shaft on the base hook④.
(3) Install the CD Holder.
(4) Install THE CD Rack assembly in CD Pick Unit.
1) Fit end Ⓐ
2) Fix screw ②.

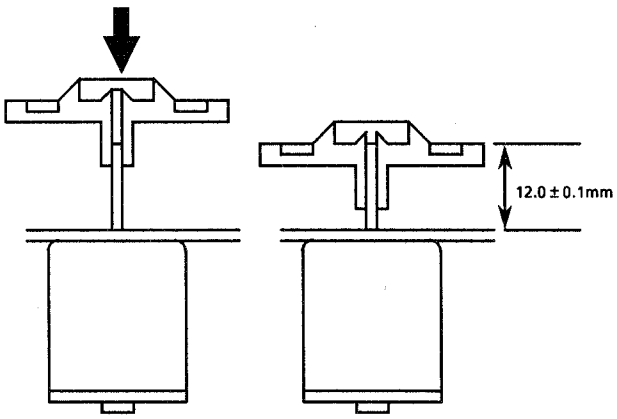
14. Spindle motor removal

(1) Remove the Mechanism assembly.
(2) Remove the Clamp assembly.
(3) Remove the turntable, and remove the two screws retaining the spindle motor.
(4) Remove the screw retaining the Spindle andFeed Motor P.C. Board and unsolder it.

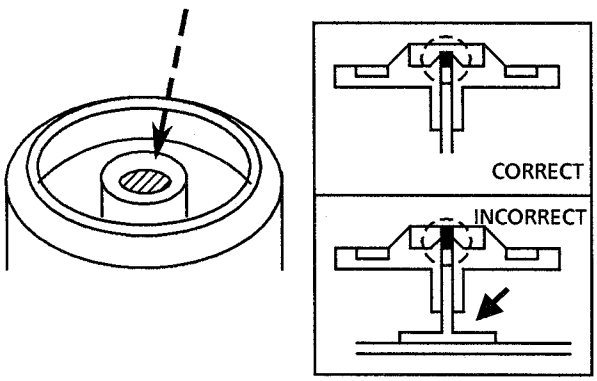


15. Spindle motor installation

(1) Tighten the 2 screws to the same torque.
(2) Fasten the Spindle and Feed Motor P.C. Board with the screw and solder.
(3) Install the turntable.When installing, press straight down at the center of the turntable until the distance from the surface of the mechanism base to the top of the turntable is exactly 12.0 ± 0.1mm.



(4) After insertion is complete, bond the motor shaft and turntable together (at the section marked by an arrow in the figure on the left below).



(5) Use "LOCKTITE" #460 bonding agent, and apply as little as possible. Take care not to allow any excess bonding agent to get onto the turntable. Be extremely careful not to allow bonding agent to adhere to the motor bearings (the section marked by an allow in the figure on the right.)

Disassembly of cassette mechanism

(Disassembly after "How to remove the cassette Mechanism assembly" explained before)

■ **How to remove the microcomputer board.**

1. Remove the mechanism assembly
2. Remove the two screws ⓑ
3. Remove the flat wires FW931-934 and leaf switch boards (A and B). then remove the board. (Take care of part ⓐ in Fig.1.)

■ **How to remove the head assembly**

1. Remove the mechanism assembly.
2. Remove the flexible wire from the relay board, then remove the two screws ⓕ fastening the head assembly (Fig.6).

Assembling of head

Since the head moves the reverse gear by means of the cam to right or left to set FWD or REV mode, the reverse gear must be installed to the same position at the time when it was removed. The positioning method of the reverse gear is shown in Fig.3.

(Note: If the reverse gear is installed in the opposite direction, the mechanism will operate wrongly.)

■ **How to remove the pinch roller assembly (FWD/REV)**

1. Remove the pinch roller return spring (Fine spring at the lower position) from the hook (Fig.6).
2. Unlatch the pawls of the pinch roller arm assembly, then remove the pinch roller arm assembly (Fig.4).

■ **How to remove the reel motor board**

1. Remove the mechanism assembly.
2. Remove the microcomputer board.
3. Remove the one screw ⓒ fastening the reel motor board (Fig.2).
4. Remove the solder from the reel motor.
5. Remove the board.
   If a force is applied to the motor terminal by pulling the reel motor board to remove it, the motor may be broken. Take care.

■ **How to remove the capstan motor**

1. Remove the mechanism assembly.
2. Remove the reel motor board.
3. Remove the four screws ⓓ fastening the bracket (Fig.2).
4. Unlatch the pawls fastening the bracket, then remove the bracket together with the capstan motor.
5. Remove the two screws fastening the capstan motor, then remove the motor.

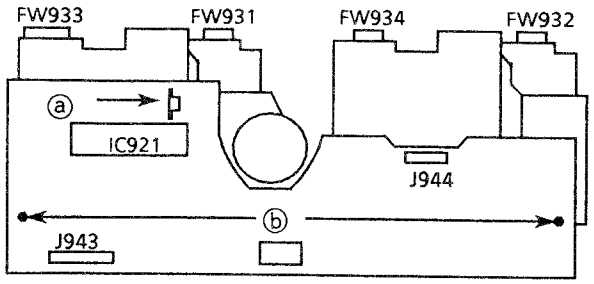


Fig.1

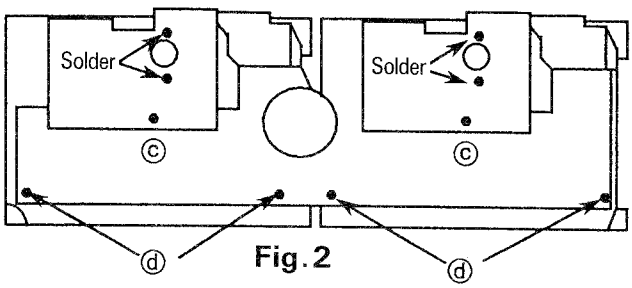
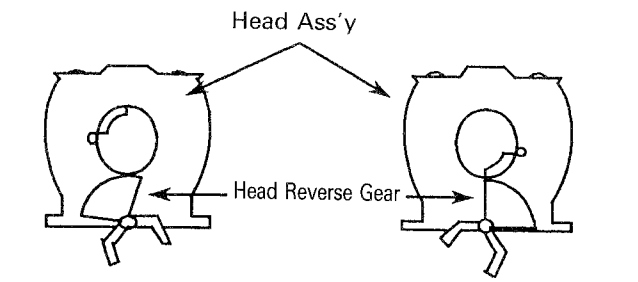
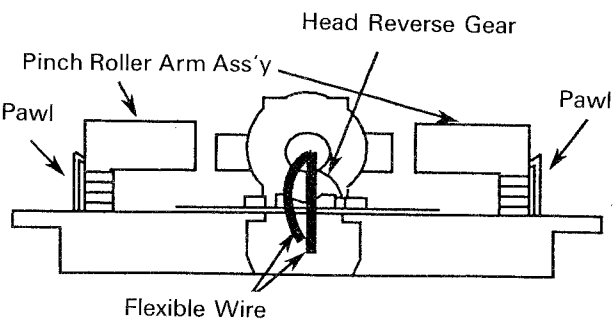


Fig.2



Bottom side of Head Ass'y

Fig.3



Bottom side of Cassette Mechanism

Fig.4

* **How to remove cassette lids**

Open the cassette door, then slide the lids in the directions of arrows to remove them.

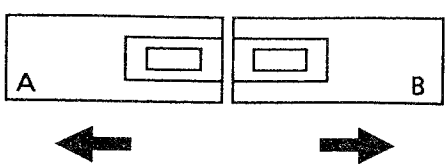


Fig.5

■ **How to remove the reel motor**

1. Remove the mechanism assembly.
2. Remove the reel motor board.
3. Pull out the FR arm assembly (Fig.6).
4. Remove the screws ⓔ fastening the reel motor.
5. Unlatch the pawls of the motor, then remove the motor.

■ **How to remove the flywheel**

1. Remove the mechanism assembly.
2. Remove the reel motor board.
3. Remove the four screws ⓓ fastening the capstan bracket (Fig.2). Remove the bracket together with the belt.
4. Remove the oil thrower washer on the pinch roller side, then remove the flywheel.

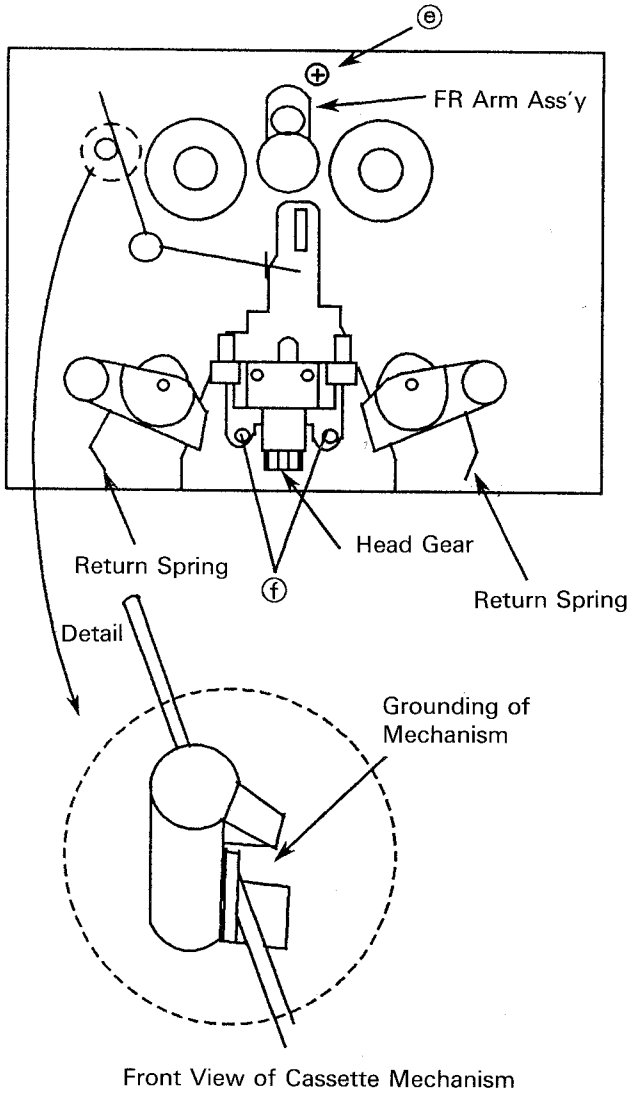
Installation

Install the flywheel and belt first as shown in Fig.8. Install the belt B to the temporary belt hanger B, then install the belt A. Install the capstan motor bracket, then re-install the belt to the pulley (Fig.8).

■ **How to remove cam switch board**

1. Remove the flywheel.
2. Remove the pawls of the cam switch board to remove the board.

(When installing the cam switch board, align the grooves of ⓖ and ⓗ with each other (Fig.7)).



Front View of Cassette Mechanism

Fig.6

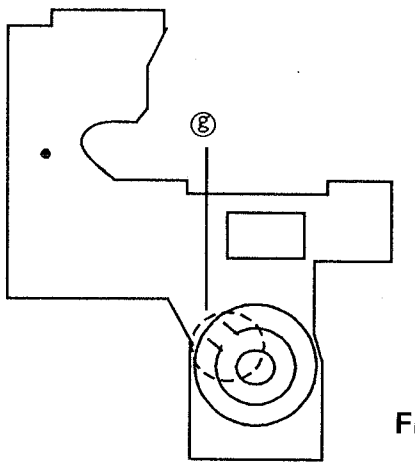
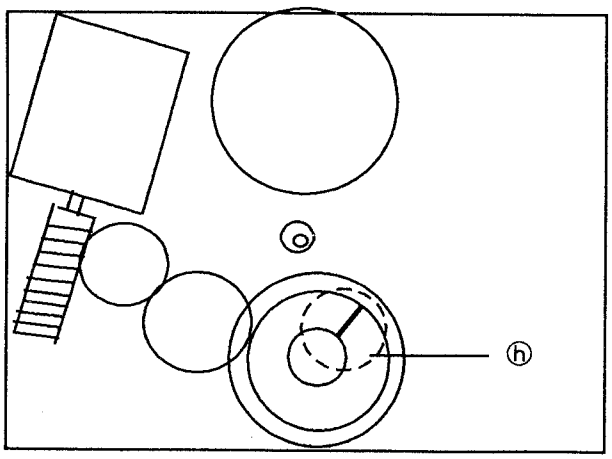


Fig.7



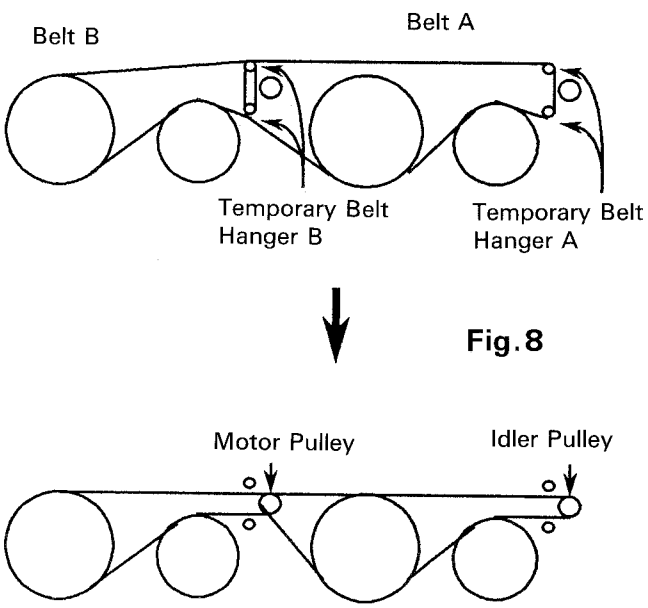


Fig.8

Examples of electric check method

Deck section

1. Remove the front panel.
2. Remove the system front board from the front panel assembly and connect it to the main board.
   At this time the system front board is fixed by only the connectors JB201,202 and 203.
   * The operation of the deck can be checked even if the head wire connectors P331 and P333 of the cassette are disconnected.
   When sound does not come out (a trouble has occurred after the head), the operation can be checked with the main circuit board without removing the front panel assembly.

CD section

1. If the RF pattern is output, the wave form can be checked by simply removing the top cover.
2. When checking the operation of the mechanism at the same time.
   1) Remove the front panel assembly.
   2) Disconnect the CD front board from the front panel assembly and connect it to the CD board. At this time, the CD front board is fixed by only the connectors P711 and P712.
   3) Remove the system front board from the front panel assembly and connect it to the main board. (The CD front board does not work if the system front board is disconnected.)
   4) When checking the laser or operation of the pickup, remove the mechanism.

Tuner section

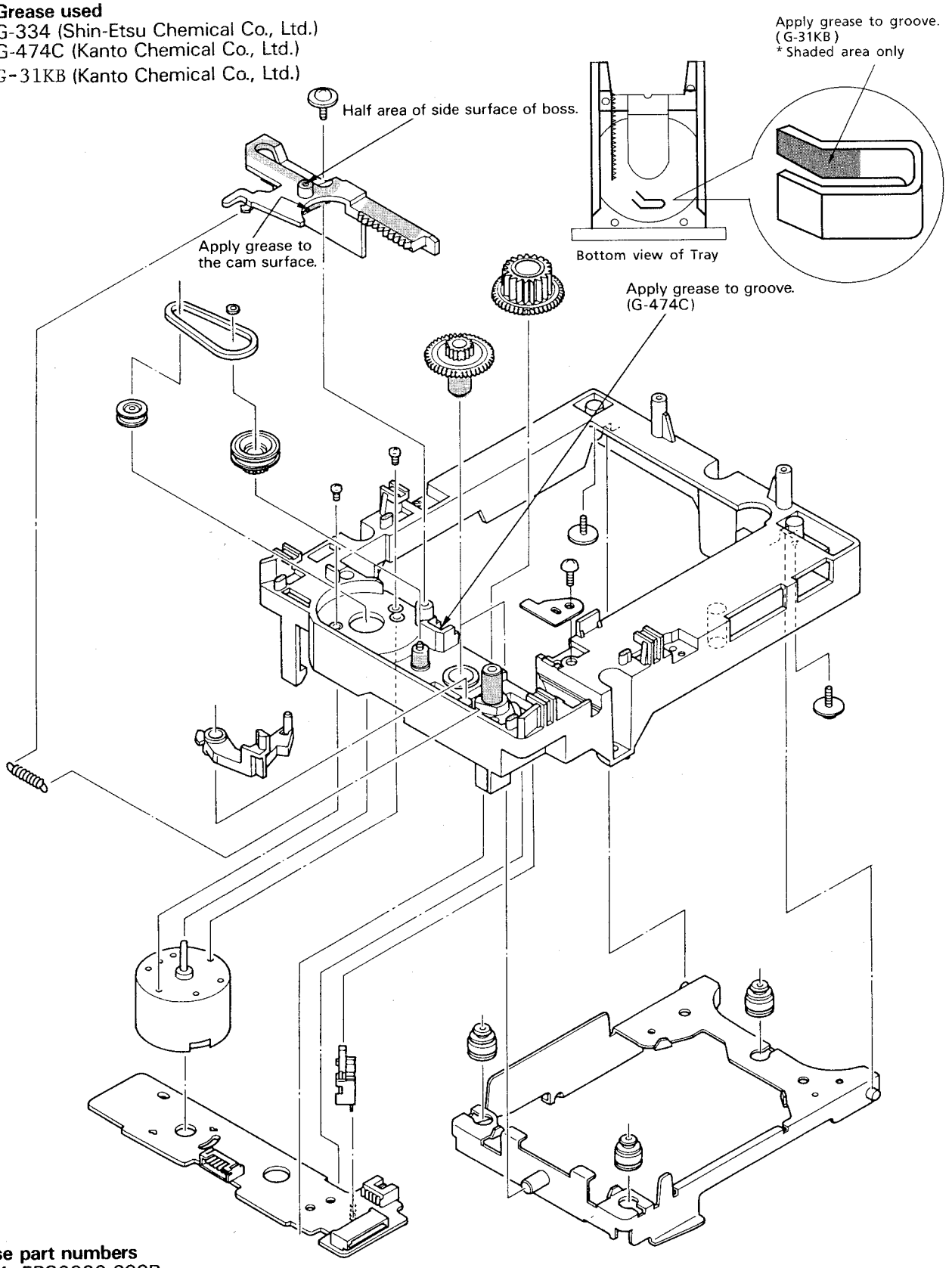
1. When checking the tuner board from rear side, remove the source selector board.
   Although sound does not come out, the signals can be followed up on the board.
   * At this time, disconnect all the flat wires from the source selector board.
   If any one of them is connected, a trouble may occur.

System front board section

1. Remove the tuner board and source selector board and check from the rear side of the board.
   When checking from the front side, remove the front panel assembly and fix only the system front board to the main board with the connectors JB201.202 and 203.

Application Points for Grease

Grease used
- G-334 (Shin-Etsu Chemical Co., Ltd.)
- G-474C (Kanto Chemical Co., Ltd.)
- G-31KB (Kanto Chemical Co., Ltd.)



Grease part numbers
G-334: EBS0006-009B
G-474C: EBS0006-019B
G-31KB: EBS0006-013B

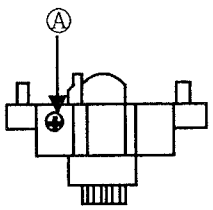
Adjusting Procedures

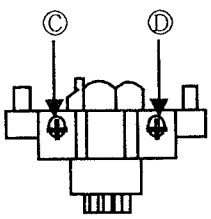
■Adjustment of cassette deck

1. Measuring instruments necessary for adjustment
   (1) Low-frequency oscillator (Oscillation frequency of 50-20 kHz and output of 0 dB with 600Ω terminal impedance)
   (2) Attenuator (Impedance:600Ω)
   (3) Electronic voltmeter
   (4) Resistor of 600Ω (For matching to attenuator)
   (5) Distortion meter (With built-in band pass filter)
   (6) Torque gauge (Cassette) CTG-N (For adjustment of mechanism)
   (7) C-120 Tape (For confirmation of tape travel)(For adjustment of mechanism)
   (8) Standard tape(Use one specified our Business Department.)
   VTT-703L(For head angle adjustment) VTT-712(Tape speed and wow and flutter)
   VTT-724(Reference level) TMT-6237(For music scan)
   TMT-6247(For music scan)
   TS-8(NORMAL),TS-10(CrO2)(Standard recording tape)

2. Adjustment and repair of mechanism

Before adjusting the electric circuit, adjust or confirm the following mechanical parts.

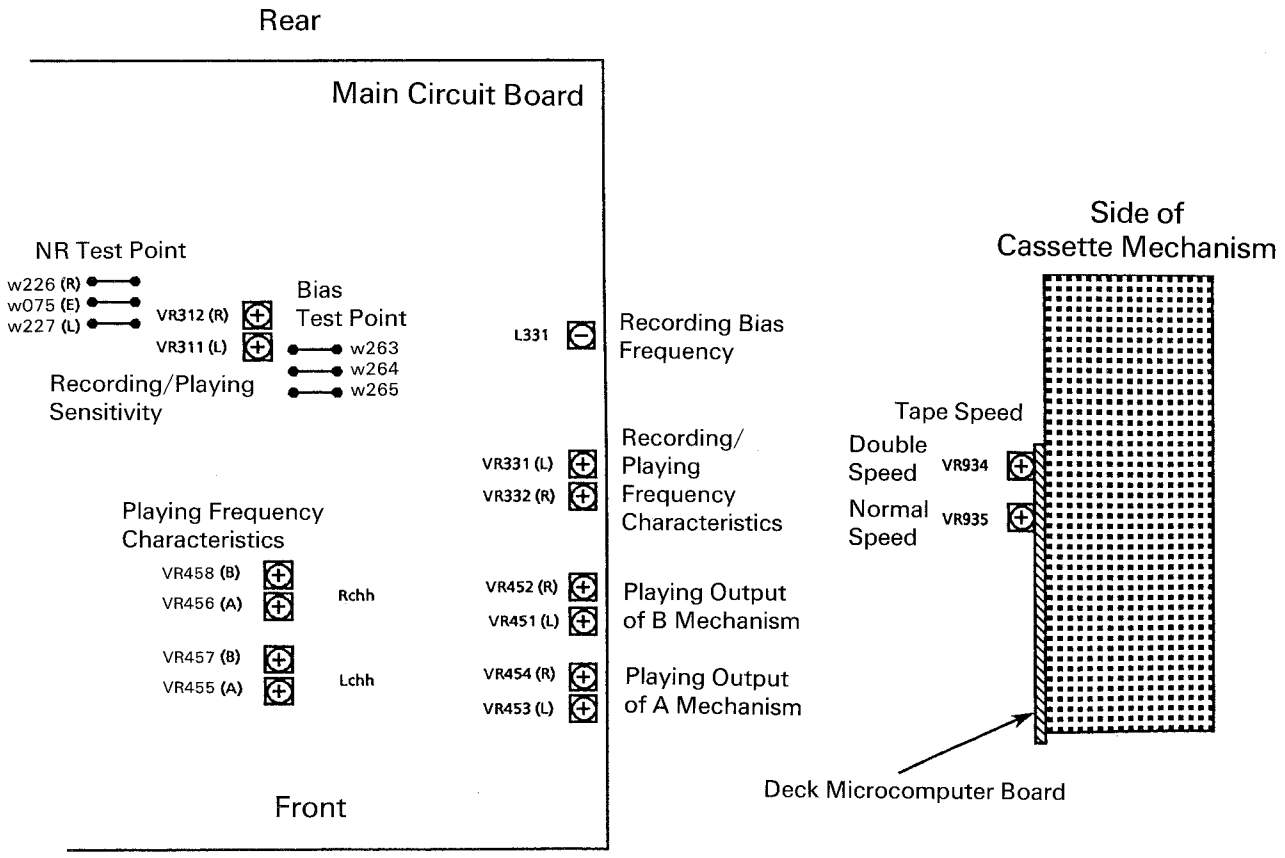
<table>
<tr><th>Item</th><th>Adjusting method</th><th>Adjusting parts</th><th>Standard value</th><th>Remarks</th></tr>
<tr><td rowspan="5">Adjustment of recording head angle
A Mecha
 

B Mecha
 
</td><td>1.Connect the output of SPK OUT terminal to the voltmeter.
2.Play VTT-703L.</td><td></td><td></td><td rowspan="4">1.If the necessary characteristics cannot be obtained because of wear, breakage, over-magnetization, etc. of the head, replace the head. After the head is replaced, adjust its angle, playing level and recording bias current.
2.If the output levels of on right and left sides are different from each other more than 3-4 dB, the customer may place a claim. Replace the head in this case.</td></tr>
<tr><td>3.Adjust the screw (A) so that the output of the voltmeter will be the maximum at PLAY (▶).</td><td>Screw (A)</td><td>Max.</td></tr>
<tr><td>4.Adjust the screw (C) so that the output of the voltmeter will be the maximum at PLAY (▶).</td><td>Screw (C)</td><td>Max.</td></tr>
<tr><td>5.Adjust the screw (D) so that the output of the voltmeter will be the maximum at PLAY (◀).</td><td>Screw (D)</td><td>Max.</td></tr>
<tr><td colspan="4">6.After the adjustment, apply adhesive to the screws (A),(C)and(D) to secure them.</td></tr>
<tr><td>Playing torque</td><td colspan="2">1.Use the torque measuring cassette CTG-N to measure the torque in the play mode.</td><td>26~62 gf-cm</td><td>If the standard torque cannot be obtained, check the motor voltage, then replace the FR arm assembly or the motor.</td></tr>
<tr><td>Fast feeding/ Rewinding torque</td><td colspan="2">1.Measure the torque similarly to the above in the fast feeding (rewinding) mode.</td><td>80~200 gf-cm</td><td>If the standard torque cannot be obtained, check the motor voltage, then replace the FR arm assembly or the motor.</td></tr>
<tr><td>Wow and flutter</td><td colspan="2">1.Play VTT-712 and connect a wow-and-flutter meter to the SPK OUT terminal. Confirm that the wow and flutter are 0.2% (WRMS) maximum.</td><td>0.2% max.</td><td>If the fluctuation is above 1.0%, a claim may be placed again, even if the test result is with in the standard value. Repair in this case.</td></tr>
<tr><td>Confirmation of auto-stop</td><td colspan="4">1.The mechanism must stop automatically at the tape end.
2.The mechanism must not stop automatically while the tape is running.</td></tr>
</table>

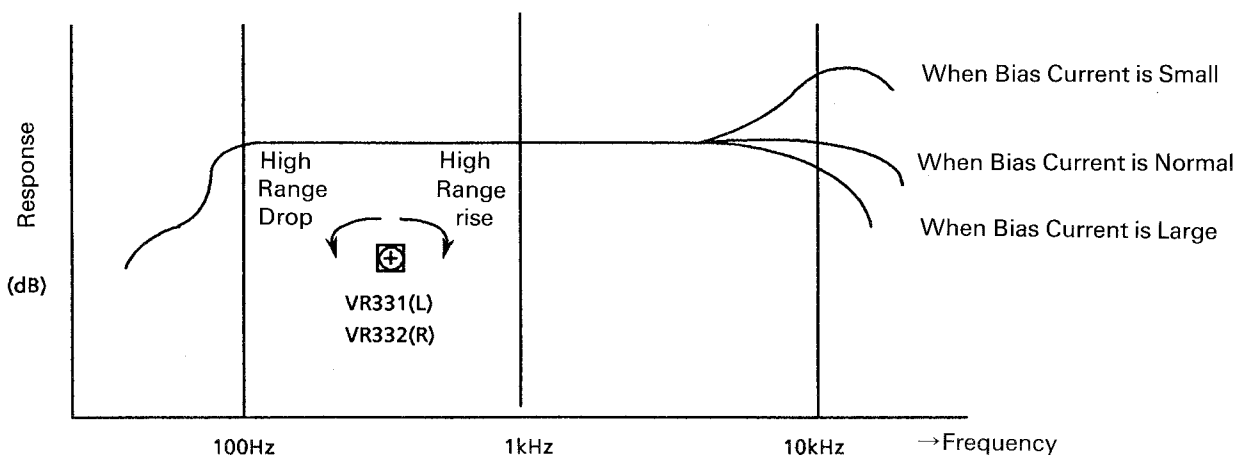
3. Adjustment of electric circuit

- Perform the following adjustment after the head angle has been adjusted.
- Perform the following adjustment according to the given procedure, as a rule.
- Perform the following adjustment with the NR switch turned off.

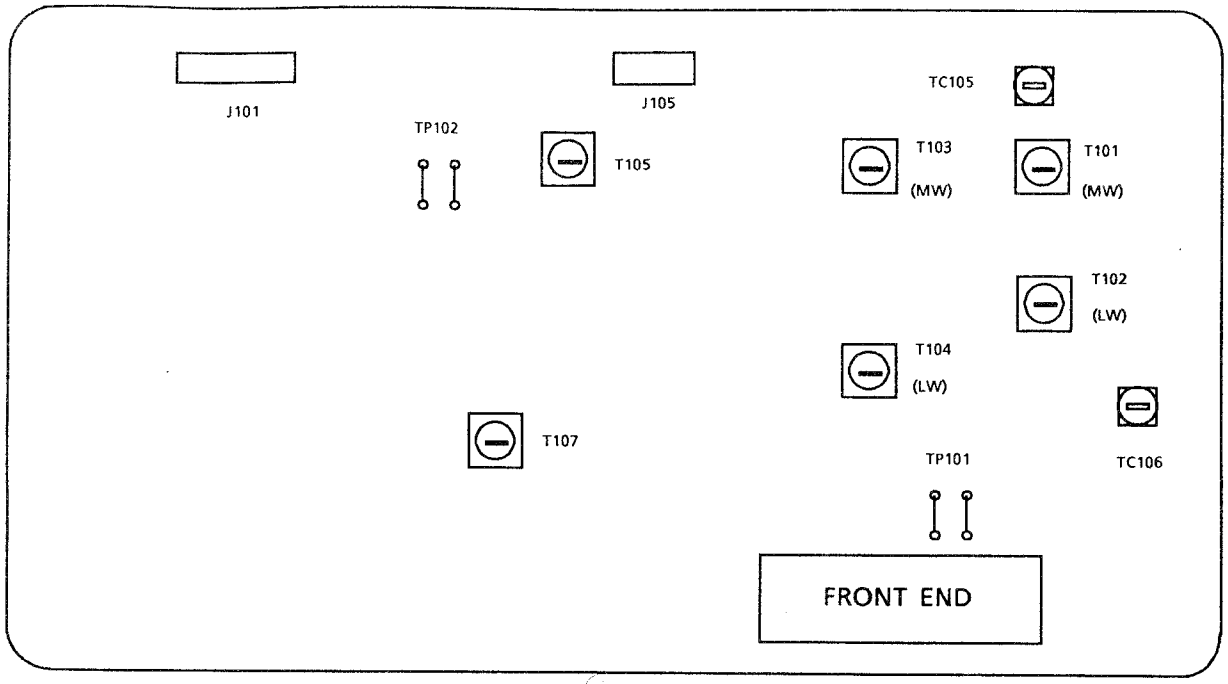
Item	Adjusting method	Adjusting parts	Standard value	Remarks
Tape speed (Be sure to adjust the normal speed first.)	1. Connect a frequency counter to the SPK OUT terminal and play VTT-712. 2. Normal speed adjustment Play the B mechanism and adjust VR935 so that 3,000 Hz will be obtained. 3. Double-speed adjustment Set a recording tape in the B deck and adjust VR934 so that the 6000 Hz will be obtained in the high-speed dubbing mode.	Semi-fixed resistor on the cassette main board VR935 VR934	3000 ±10Hz 6000 ±20Hz	In case of a wow-and-flutter meter having a frequency counter in it, simply connect the output to its INPUT terminal.
Playing output	1. Play VTT-724 (1 kHz) and adjust the output of the w227(L) and W226(R) to 400 mV.	A VR453(L) VR454(R) B VR451(L) VR452(R)	400mV	The playing level changes when the head is replaced. Adjust it in this case. The impedance of the electronic voltmeter must be 100kΩ minimum.
Playing frequency characteristics	1. Play VTT-703L (10kHz. −10dB) and adjust the output of the W227(L) and W226(R) to 200 mV.	A VR455(L) VR456(R) B VR457(L) VR458(R)	200mV	
Recording bias frequency	Connect a frequency counter between W263 and W264 of the bias TP, then adjust by recording no signals on the chromium tape.	L331	105kHz + 5kHz −10kHz	



Item	Adjusting method	Adjusting parts	Standard value	Remarks
Recording/Playing frequency characteristics	1.Turn off the NR switch and input 1 kHz (30 mV) to the VIDEO/AUX terminal to record it. 2.Further record 100 Hz/10 kHz, then play it and so adjust VR331(L) and VR332(R) that the difference between the output of 1 kHz and that of 100 Hz/10 kHz will satisfy the standard value. (Basically, so adjust that the output of 1 kHz and 10 kHz will be flat.)	VR331(L) VR332(R)	Output of 100 Hz must be 0± 3 dB and that of 10 kHz must be 0±2 dB on the basis of that of 1 kHz.	1) As a rule, adjust the recording/ playing frequency characteristics of the cassette deck by adjusting the bias, since the former relies more on the bias current compared with the open reel deck. 2)If the bias current is not adjusted correctly, the recording characteristics will be as shown below. 3)Adjust by using a normal tape. As for chromium tape, confirm that the output is in the normal range.
Recording/playing sensitivity	1.Input 1 kHz (300 mV) to the VIDEO/AUX terminal and record it on a normal tape. 2.Adjust the recording signal current so that the output of W227(L) and W226(R) will be 400 mV when the above 1 kHz is played.	VR311(L) VR312(R)	400mV	Adjust by using a normal tape. As for chromium tape, confirm that its level difference is 1.5 dB maximum and the level difference between right and left signals is 1.0 dB maximum.
Confirmation of recording/playing distortion	1.Input 1-kHz (300 mV) signal to the VIDEO/ AUX terminal to record it. 2.Play the above signal and confirm with a distortion meter that the SPK OUT output satisfies the standard value.		Normal tape: 3%max. Chromium tape: 3%max.	Perform this confirmation after the adjustment of recording/playing frequency characteristics and recording/playing sensitivity.
Confirmation of recording/playing S/N	1.Input 1-kHz (300 mV) signal to the VIDEO/ AUX terminal and record it. While recording, disconnect the input to record no signals (or press the REC MUTE button). 2.Play the above tape and measure the ratio of the outputs of 300 mV and no signals with an electronic voltmeter. The ratio must satisfy the standard value. (Use SPK OUT.)		Normal tape: 45 dB min. Chromium tape: 45 dB min.	
Confirmation of erasability	1.Input 400Hz (950 mV) signal to VIDEO/ AUX terminal to record it. 2.Rewind the tape and erase it partly. 3.Measure the ratio of the output of the recorded part to that of the erased part with an electronic voltmeter.		55 dB min.	When measuring, connect BPF (Band Pass Filter) of 400Hz between the deck and electronic voltmeter. Perform this test with a chromium tape.
Confirmation of music scan	1.Use TMT.6247. The tune selecting operation must be performed at the end of winding in the REW SCAN mode and the start of winding in the REW SCAN Mode. 2.TMT.6237 must not perform tune selecting operation.			



Adjustment Procedures (FM/AM Tuner)



1. FM section

■ FM oscillator

(1) Set the frequency display to "108.0MHz"(74.0MHz).
(2) Confirm that the FM inter-station noise is received.
(3) Confirm that the voltage of test point "TP101" becomes 8.0V ± 2.0V(7.7 ± 1.3V).
(4) Set the frequency display to "87.5MHz"(64.0MHz) and confirm the voltage of test point "TP101" becomes 1.6V ± 1.0V(2.2 ± 1.0V).
Note : ( ) : Rumania , Poland and U.S.S.R

■ FM detector coil : T105

(1) Connect a digital voltmeter to test point "TP 102", and receive to "100.1MHz" (69.0MHz) signal with SSG ATT 70dB.
(2) Adjust T105 so that the digital voltmeter reads 0 ± 1.5mV.

2. MW section

Note : ( ) : Australia , the U.K. and Continental Europe
{ } : Channel space 9KHz for universal version
[ ] : Channel space 10KHz for universal version
〔 〕: U.S.A., Canada

■ MW oscillator : T103

(1) Set the frequency display to (522KHz) 〔531KHz〕[530KHz]〔530KHz〕 and confirm that the voltage of test point TP101 become (0.9V±0.2V) {1.0V ± 0.2V} [1.0V ± 0.2V] 〔0.9V±0.2V〕

(2) Set the frequency display to (1629KHz) 〔1602KHz〕[1600KHz]〔1710KHz〕 and confirm that the voltage of test point TP101 becoms (7.5V±0.8 V)〔7.2V±0.7V〕[7.2V±0.7V]〔8.0V±0.8V〕

(3) If its voltage exceeds the allowance , adjust T103 to obtain the voltage .

■ MW antenna coil : T101

(1) Connect a loop antenna to the "AM Loop" terminal on the rear panel.
(2) Adjust T101 to obtain the best receiving sensitivity on 600KHz or 603KHz .

■ MW antenna trimmer : TC105

(1) Adjust TC105 to obtain the best receiving sensitivity on 1400KHz or 1404KHz .

3. LW section

Note : [ ] for Italy

■ LW oscillator : T104

(1) Set the frequency display to 144KHz and adjust T104 so that the voltage of TP101 becomes 0.8V ± 0.1V [0.8V ± 0.1V] .
(2) Set the frequency display to 353KHz [290KHz] and confirm that the voltage of test point TP101 becomes 7.7V ± 0.6V [5.7V ± 0.5V] .

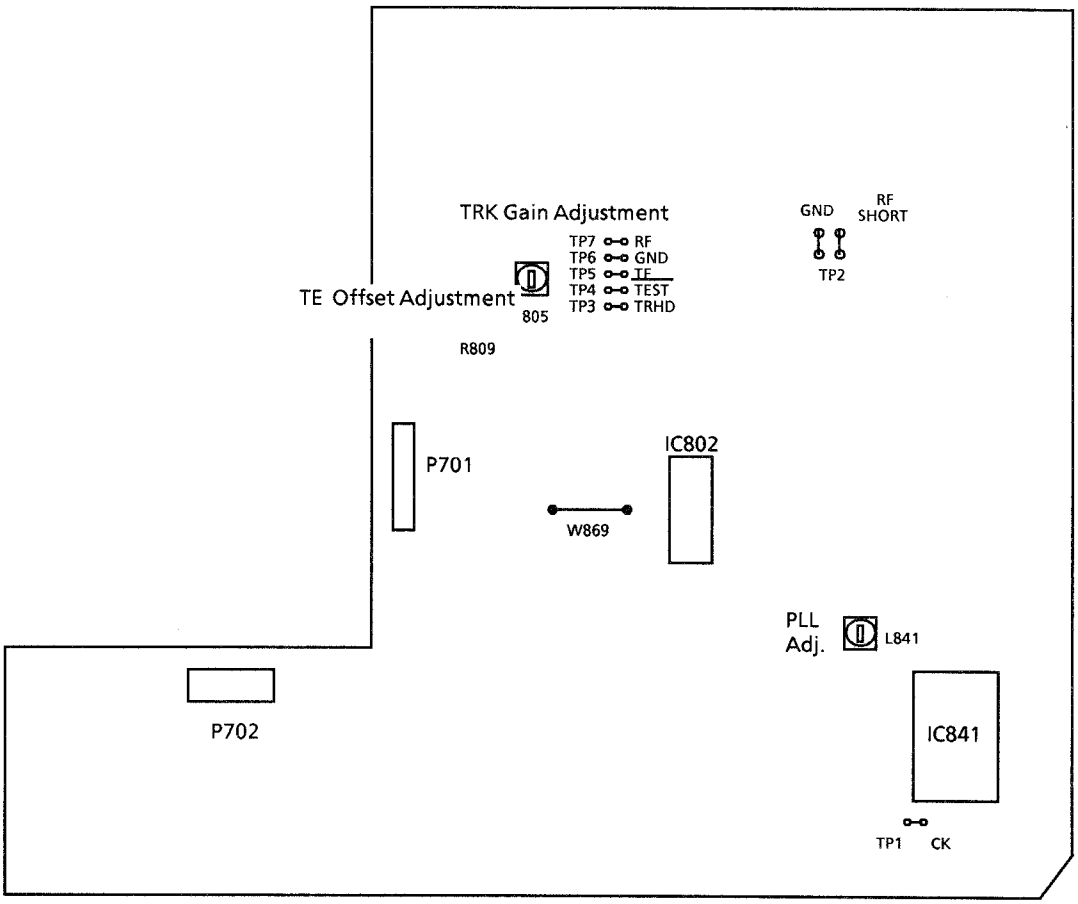
■ LW antenna coil : T102

(1) Connect a loop antenna to the "AM Loop" terminal on the rear panel.
(2) Adjust T102 to obtain the best receiving sensitivity on 164KHz [164KHz] .

■ LW antenna trimmer : TC106

(1) Adjust TC106 to obtain the best receiving sensitivity on 353KHz [245KHz] .

Adjustment Procedures (CD)



(1) PLL free-running adjustment

a. Measuring instrument
   Frequency counter
b. Adjusting procedure
   1. Connect a frequency counter with TP1 (CK) and TP6 (GND) on the main PC board..
   2. Adjust L841 for setting the frequency counter's value becomes 4.320 ± 0.005MHz.(On the STOP MODE)
   3. Perform this adjustment immediately after the power is turned on.

(2) Tracking gain adjustment

a. Measuring instruments
   Oscilloscope, Normal disc
b. Adjusting procedure
   1. Connect an oscilloscope with TP5 (TE) and TP6(GND) on the main PC board.
   2. Play the disc.
   3. Short circuit TP4 (TEST) to TP6 (GND).
   4. Adjust R805 for setting tracking error signal becomes 2.0 $V_{p\text{-}p}$.

(3) Tracking offset adjustment

a. Measuring instruments
   Oscilloscope, Normal disc
b. Adjusting procedure
   1. Connect an oscilloscope with TP5 (TE) and TP6 (GND) on the main PC board.
   2. Play the disc.
   3. Short circuit TP4 (TEST) to TP6 (GND).
   4. Adjust R809 for setting the DC level of the tracking error (off set) becomes 0.

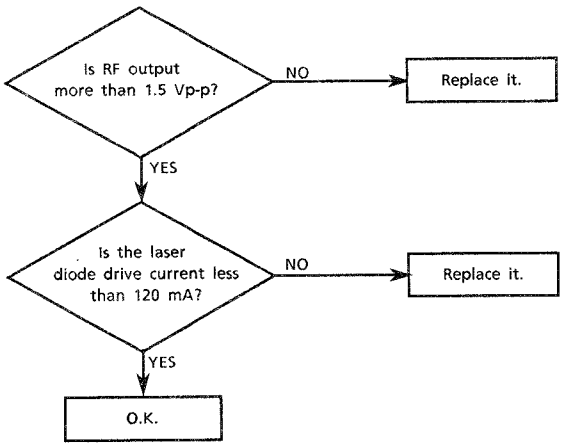
   Note: Adjust R809 for setting the waveform becomes symmetrical around the 0 level.

Maintenance of Laser Pickup

(1) Life of the laser diode

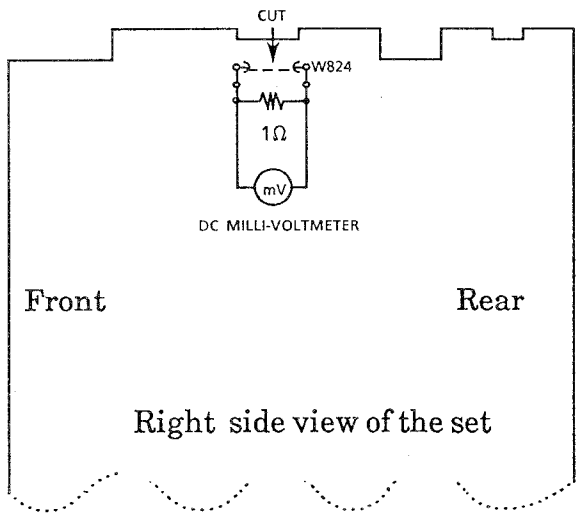
When the life of the laser diode has expired, the following symptoms will appear.

1. The level of RF output (EFM output: amplitude of eye pattern) will be low.
2. The drive current required by the laser diode will be increased.
   In such a case, check the life of the laser diode following the flowchart below



(2) Measurement of laser diode drive current

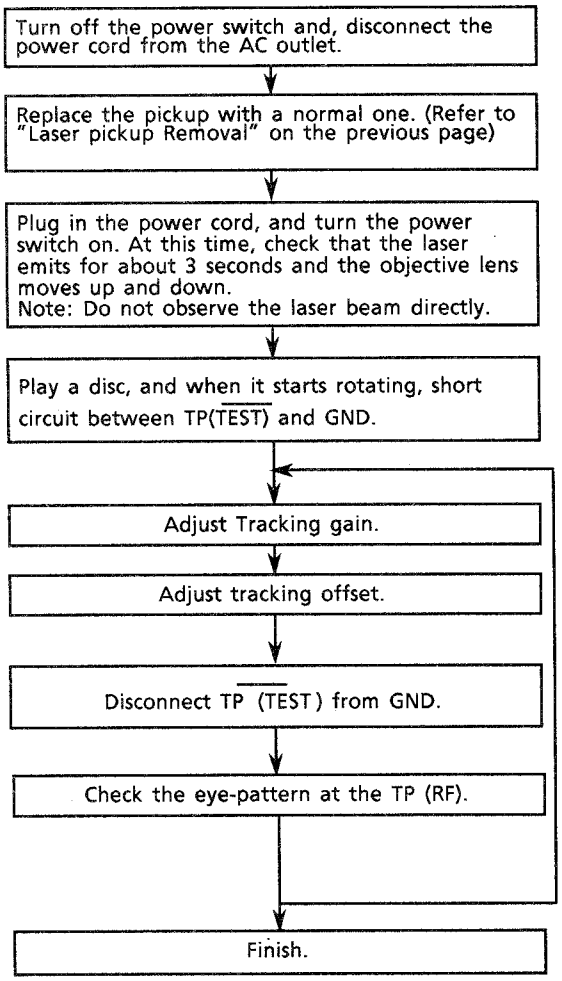
Replace the jump wire (W824) shown below with the resistor (1Ω).
Measure the voltage across the resistor with a milli-voltmeter. If the voltage is more than 120mV, the life of the laser diode has expired



(3) Semi-fixed resistor on the APC PC board

The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

Replacement of Laser Pickup


Turn off the power switch and, disconnect the power cord from the AC outlet.
Replace the pickup with a normal one. (Refer to "Laser pickup Removal" on the previous page)
Plug in the power cord, and turn the power switch on. At this time, check that the laser emits for about 3 seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc, and when it starts rotating, short circuit between TP(TEST) and GND.
Adjust Tracking gain.
Adjust tracking offset.
Disconnect TP (TEST) from GND.
Check the eye-pattern at the TP (RF).
Finish.

Note: Since one adjustment may affect other settings, repeat these adjustments a few times.

Flow of Functional Operation Until TOC is Read

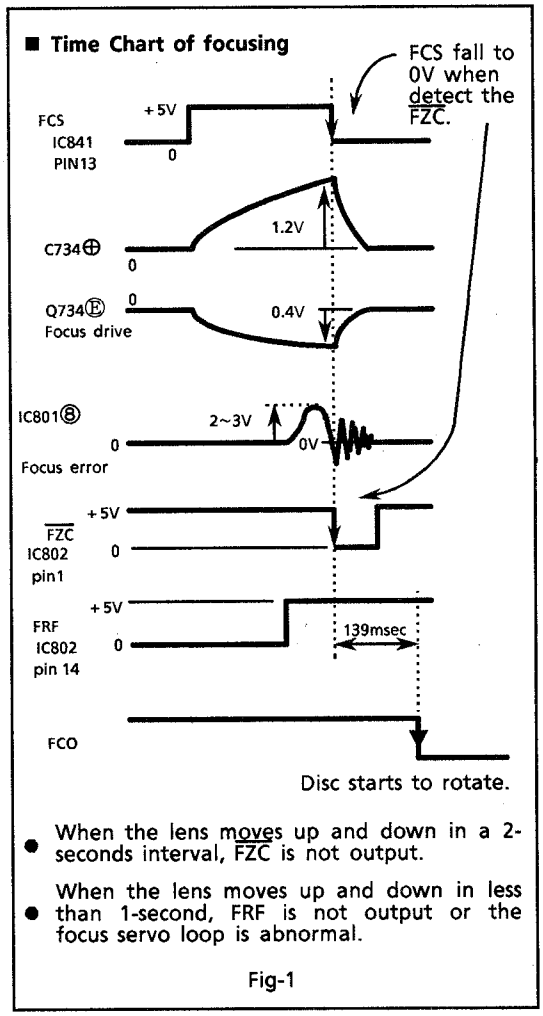


Fig-1

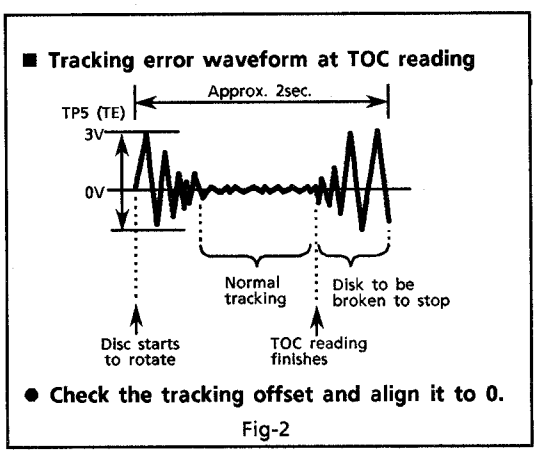
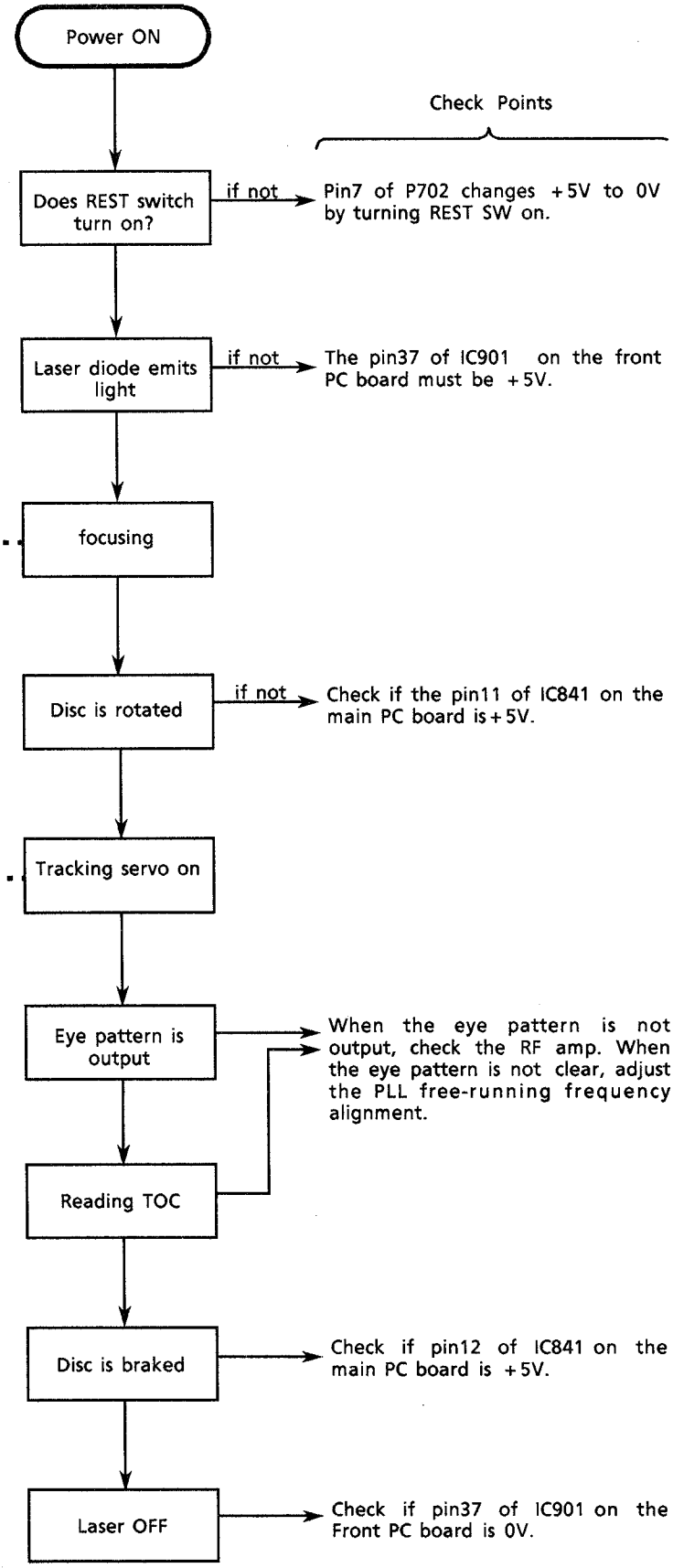
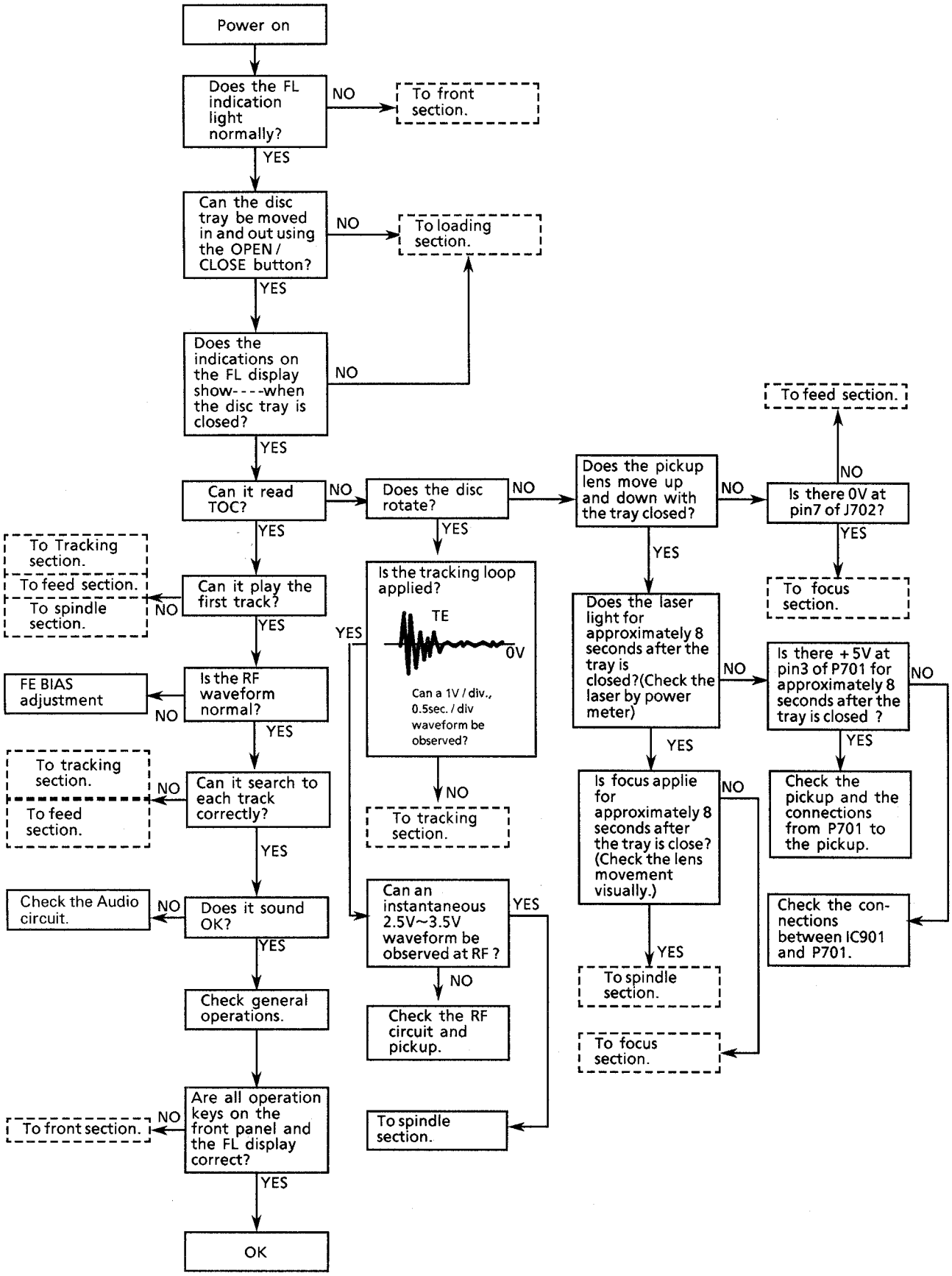


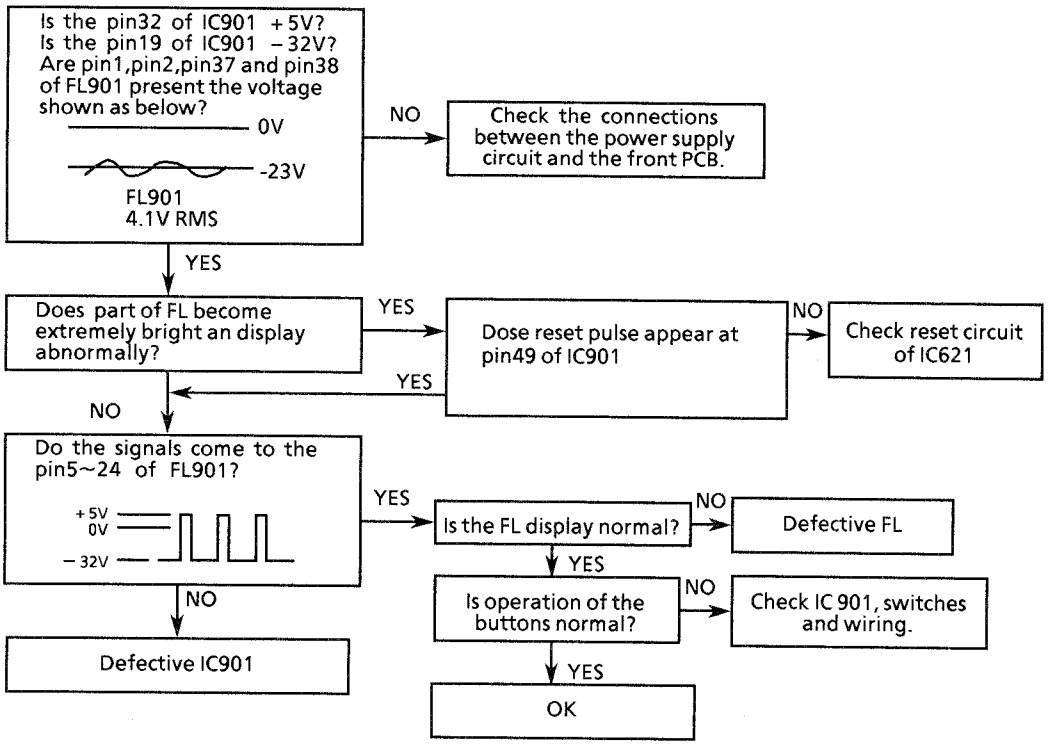
Fig-2


Power ON
Check Points
Does REST switch turn on?
if not
Pin7 of P702 changes +5V to 0V by turning REST SW on.
Laser diode emits light
if not
The pin37 of IC901 on the front PC board must be +5V.
focusing
Disc is rotated
if not
Check if the pin11 of IC841 on the main PC board is +5V.
Tracking servo on
Eye pattern is output
When the eye pattern is not output, check the RF amp. When the eye pattern is not clear, adjust the PLL free-running frequency alignment.
Reading TOC
Disc is braked
Check if pin12 of IC841 on the main PC board is +5V.
Laser OFF
Check if pin37 of IC901 on the Front PC board is 0V.

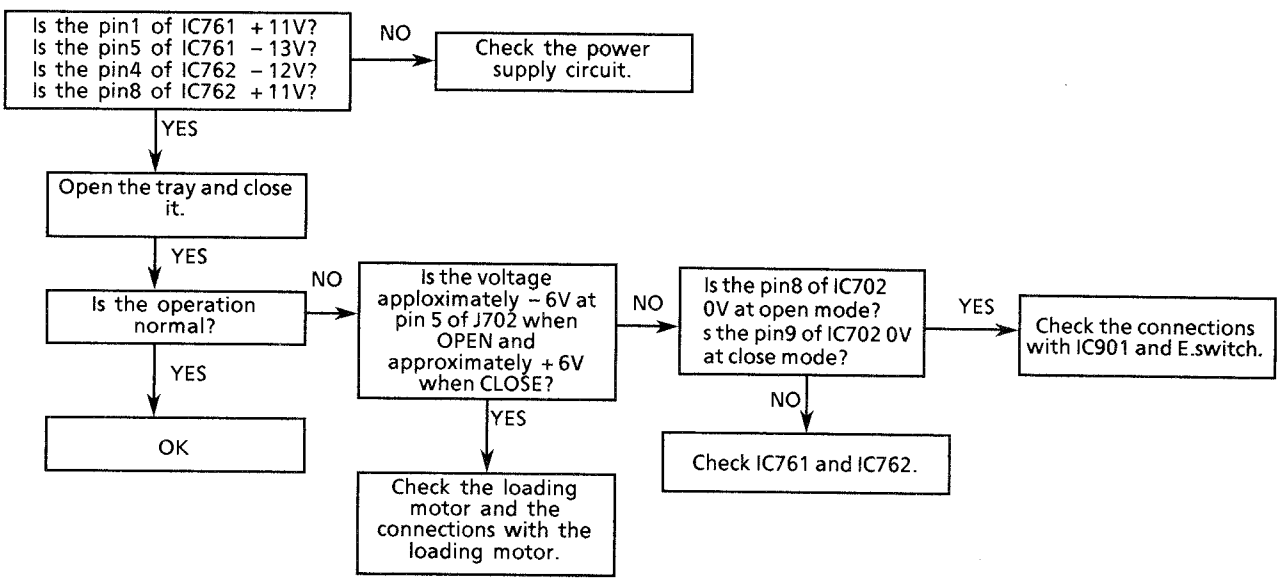
Troubleshooting



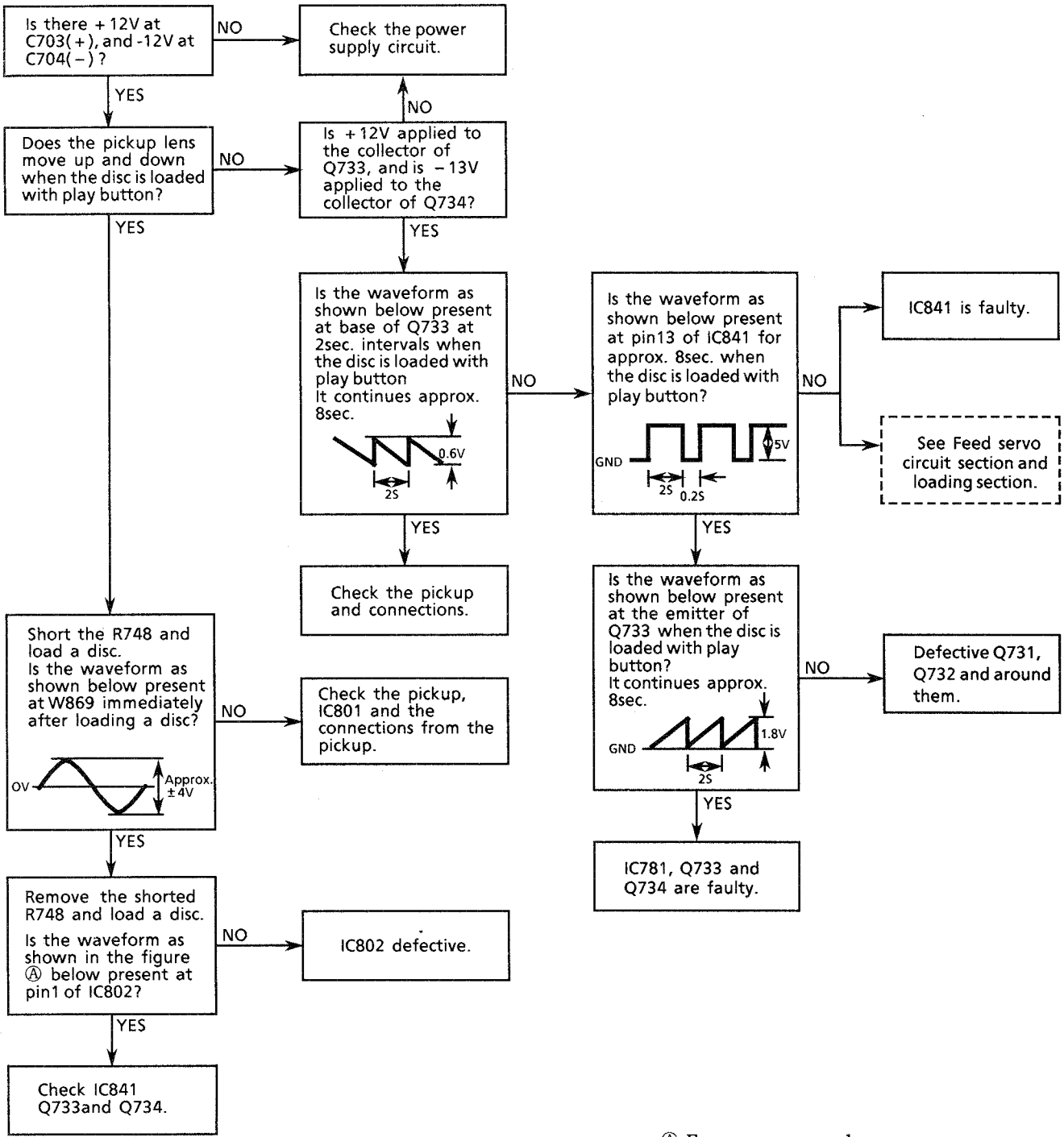
Front Section



Loading section

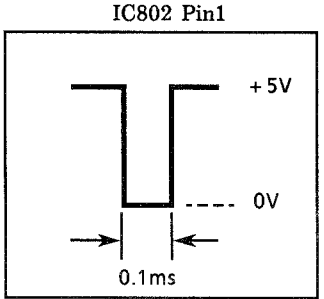

Is the pin1 of IC761 +11V?
Is the pin5 of IC761 −13V?
Is the pin4 of IC762 −12V?
Is the pin8 of IC762 +11V?
NO
Check the power supply circuit.
YES
Open the tray and close it.
YES
Is the operation normal?
NO
Is the voltage apploximately −6V at pin 5 of J702 when OPEN and approximately +6V when CLOSE?
NO
Is the pin8 of IC702 0V at open mode? s the pin9 of IC702 0V at close mode?
YES
Check the connections with IC901 and E.switch.
YES
OK
YES
Check the loading motor and the connections with the loading motor.
NO
Check IC761 and IC762.

Focus servo circuit section

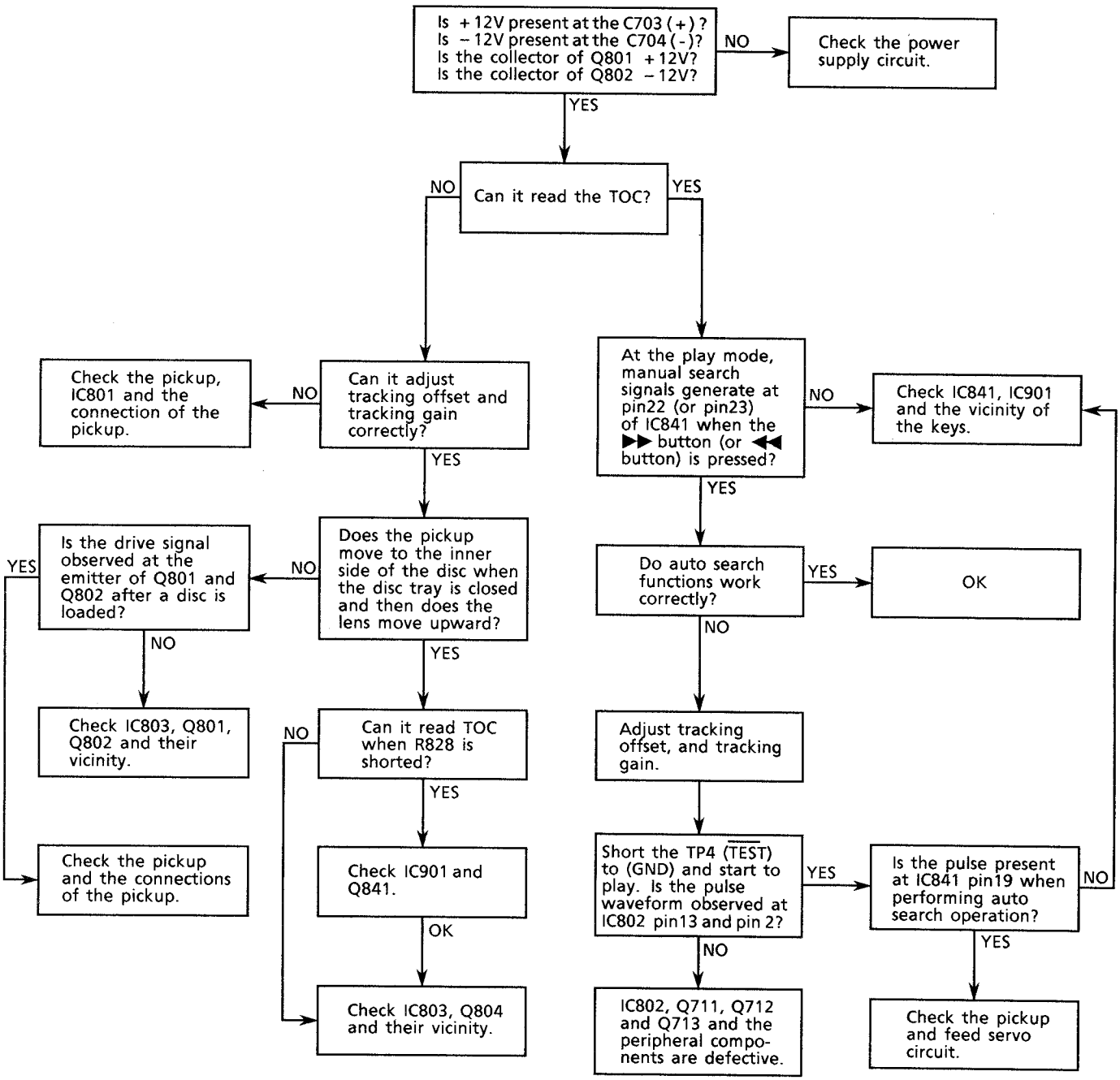

Is there +12V at C703(+), and -12V at C704(−)?
NO
Check the power supply circuit.
YES
NO
Does the pickup lens move up and down when the disc is loaded with play button?
NO
Is +12V applied to the collector of Q733, and is −13V applied to the collector of Q734?
YES
YES
Is the waveform as shown below present at base of Q733 at 2sec. intervals when the disc is loaded with play button It continues approx. 8sec.
0.6V
2S
NO
Is the waveform as shown below present at pin13 of IC841 for approx. 8sec. when the disc is loaded with play button?
GND
5V
2S
0.2S
NO
IC841 is faulty.
See Feed servo circuit section and loading section.
YES
YES
Check the pickup and connections.
Short the R748 and load a disc.
Is the waveform as shown below present at W869 immediately after loading a disc?
OV
Approx. ±4V
NO
Check the pickup, IC801 and the connections from the pickup.
Is the waveform as shown below present at the emitter of Q733 when the disc is loaded with play button?
It continues approx. 8sec.
GND
1.8V
2S
NO
Defective Q731, Q732 and around them.
YES
YES
IC781, Q733 and Q734 are faulty.
Remove the shorted R748 and load a disc.
Is the waveform as shown in the figure Ⓐ below present at pin1 of IC802?
NO
IC802 defective.
YES
Check IC841 Q733and Q734.

Ⓐ Focus zero cross pulse.

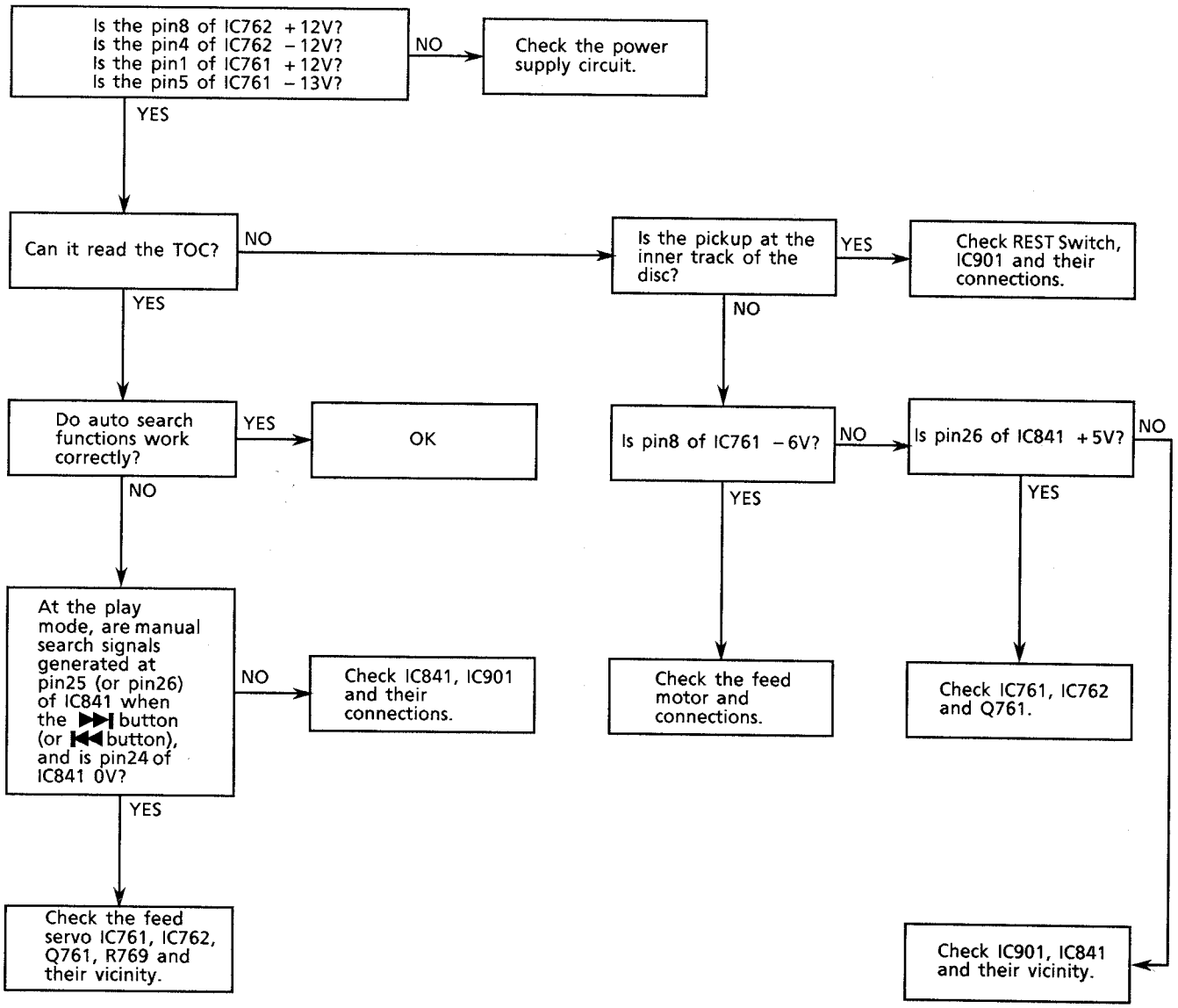
IC802 Pin1



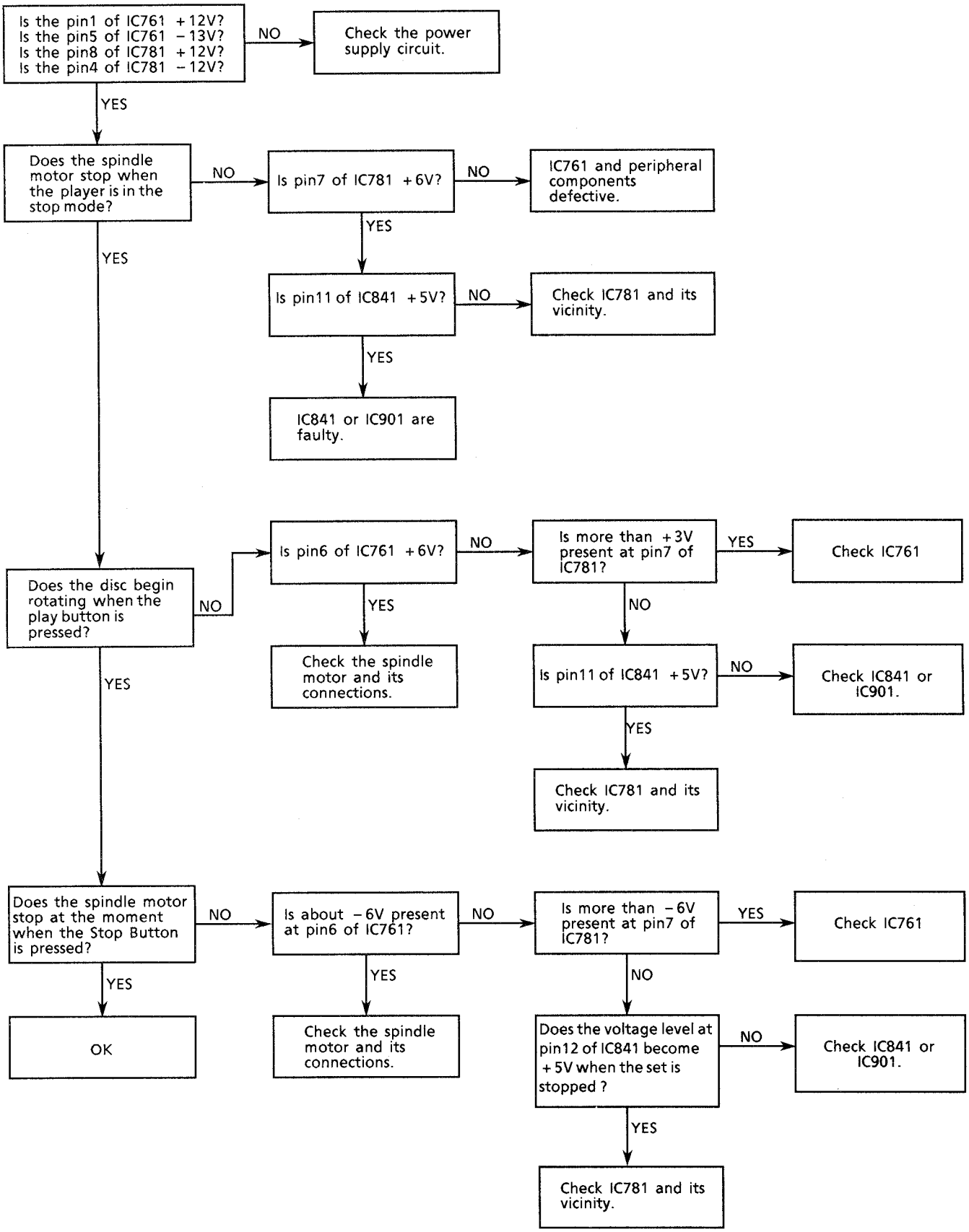
Tracking servo circuit section


Is +12V present at the C703 (+)?
Is −12V present at the C704 (-)?
Is the collector of Q801 +12V?
Is the collector of Q802 −12V?
NO
Check the power supply circuit.
YES
NO
Can it read the TOC?
YES
Check the pickup, IC801 and the connection of the pickup.
NO
Can it adjust tracking offset and tracking gain correctly?
YES
At the play mode, manual search signals generate at pin22 (or pin23) of IC841 when the ▶▶ button (or ◀◀ button) is pressed?
NO
Check IC841, IC901 and the vicinity of the keys.
YES
Is the drive signal observed at the emitter of Q801 and Q802 after a disc is loaded?
YES
NO
Does the pickup move to the inner side of the disc when the disc tray is closed and then does the lens move upward?
NO
YES
Do auto search functions work correctly?
YES
OK
NO
Check IC803, Q801, Q802 and their vicinity.
NO
Can it read TOC when R828 is shorted?
YES
Adjust tracking offset, and tracking gain.
Check the pickup and the connections of the pickup.
Check IC901 and Q841.
OK
Short the TP4 (TEST) to (GND) and start to play. Is the pulse waveform observed at IC802 pin13 and pin 2?
YES
Is the pulse present at IC841 pin19 when performing auto search operation?
NO
YES
NO
Check IC803, Q804 and their vicinity.
IC802, Q711, Q712 and Q713 and the peripheral components are defective.
Check the pickup and feed servo circuit.

Feed servo circuit section


Is the pin8 of IC762 +12V?
Is the pin4 of IC762 −12V?
Is the pin1 of IC761 +12V?
Is the pin5 of IC761 −13V?
NO
Check the power supply circuit.
YES
Can it read the TOC?
NO
Is the pickup at the inner track of the disc?
YES
Check REST Switch, IC901 and their connections.
NO
YES
Do auto search functions work correctly?
YES
OK
NO
Is pin8 of IC761 −6V?
NO
Is pin26 of IC841 +5V?
NO
YES
YES
At the play mode, are manual search signals generated at pin25 (or pin26) of IC841 when the ▶▶| button (or |◀◀ button), and is pin24 of IC841 0V?
NO
Check IC841, IC901 and their connections.
Check the feed motor and connections.
Check IC761, IC762 and Q761.
YES
Check the feed servo IC761, IC762, Q761, R769 and their vicinity.
Check IC901, IC841 and their vicinity.

Spindle servo circuit section



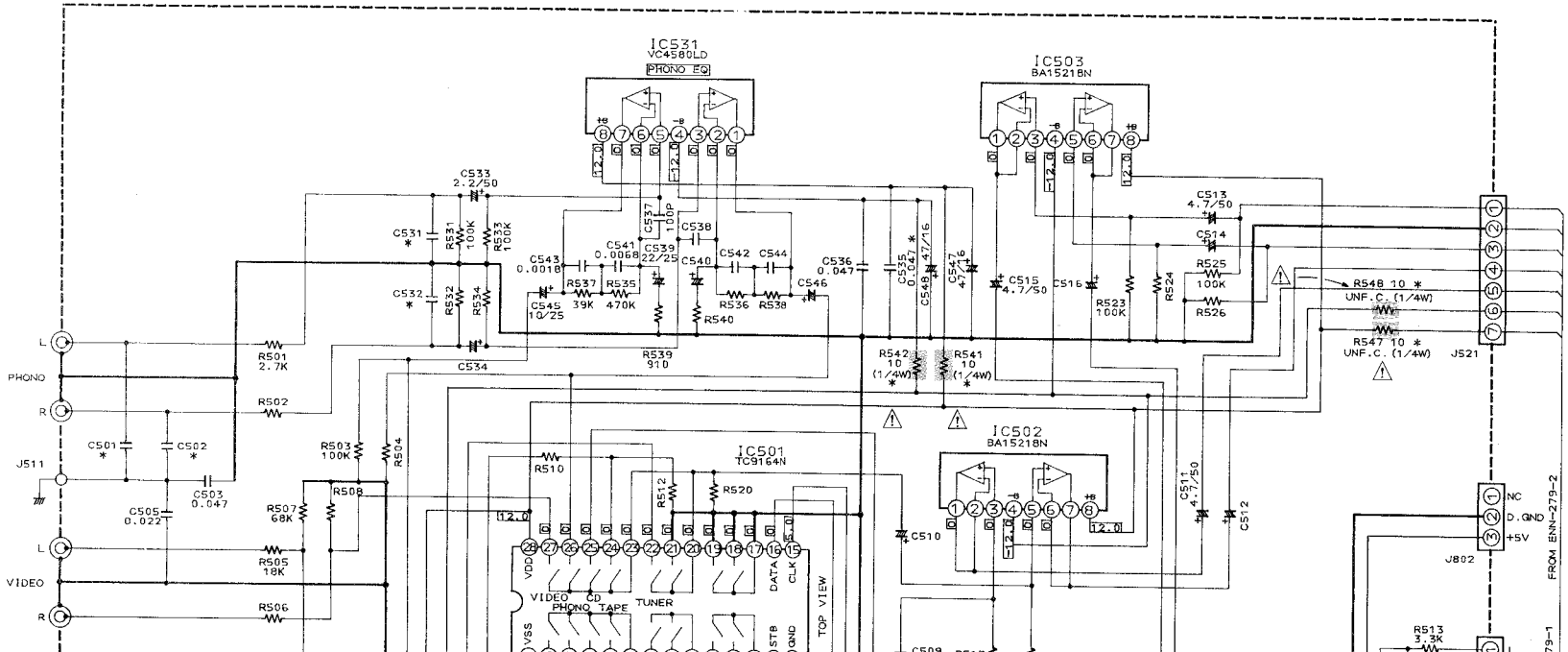
SCHEMATIC DIAGRAMS

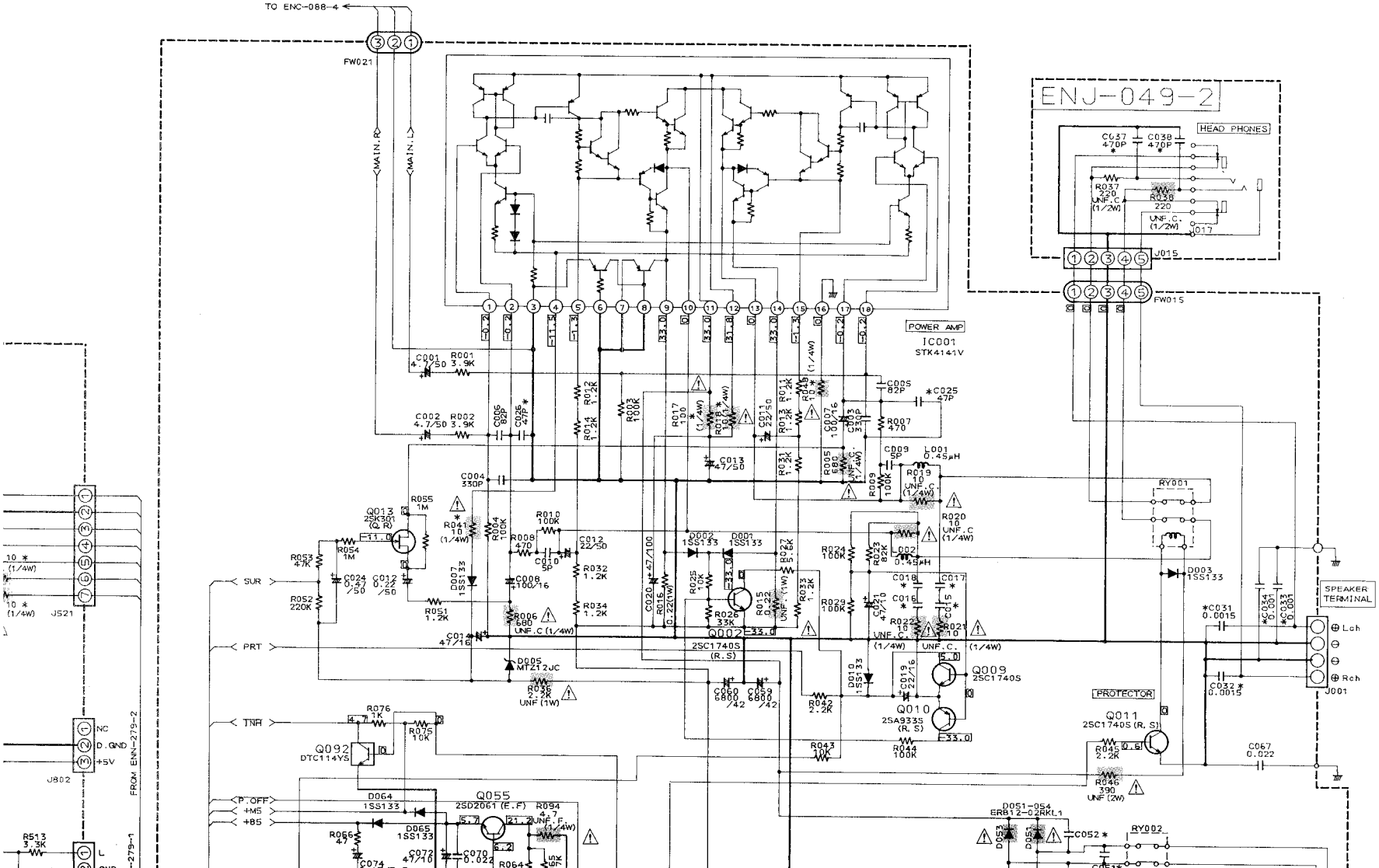
■ INPUT SELECTOR & POWER SOURSE SECTION

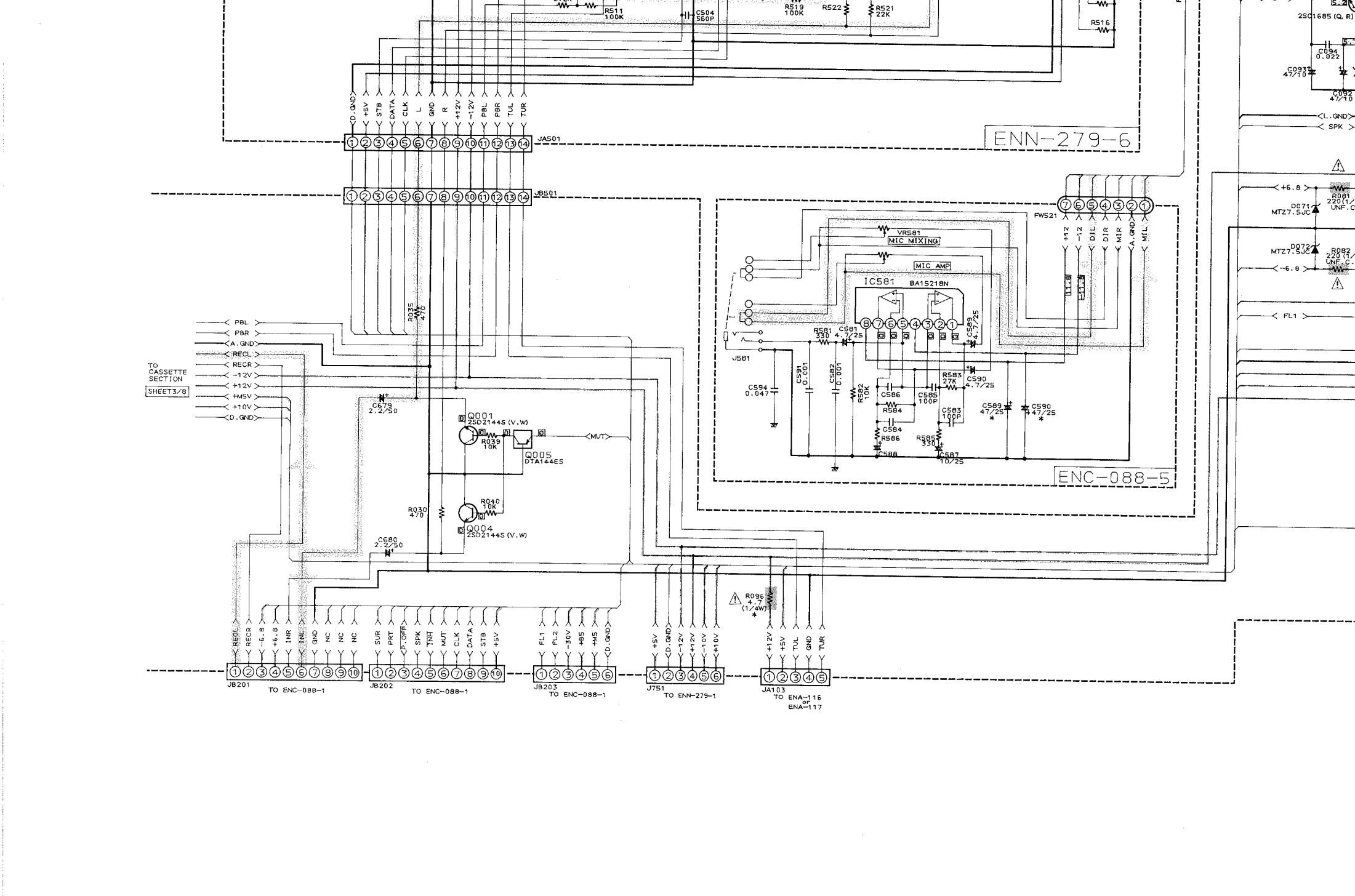
＊ LIST

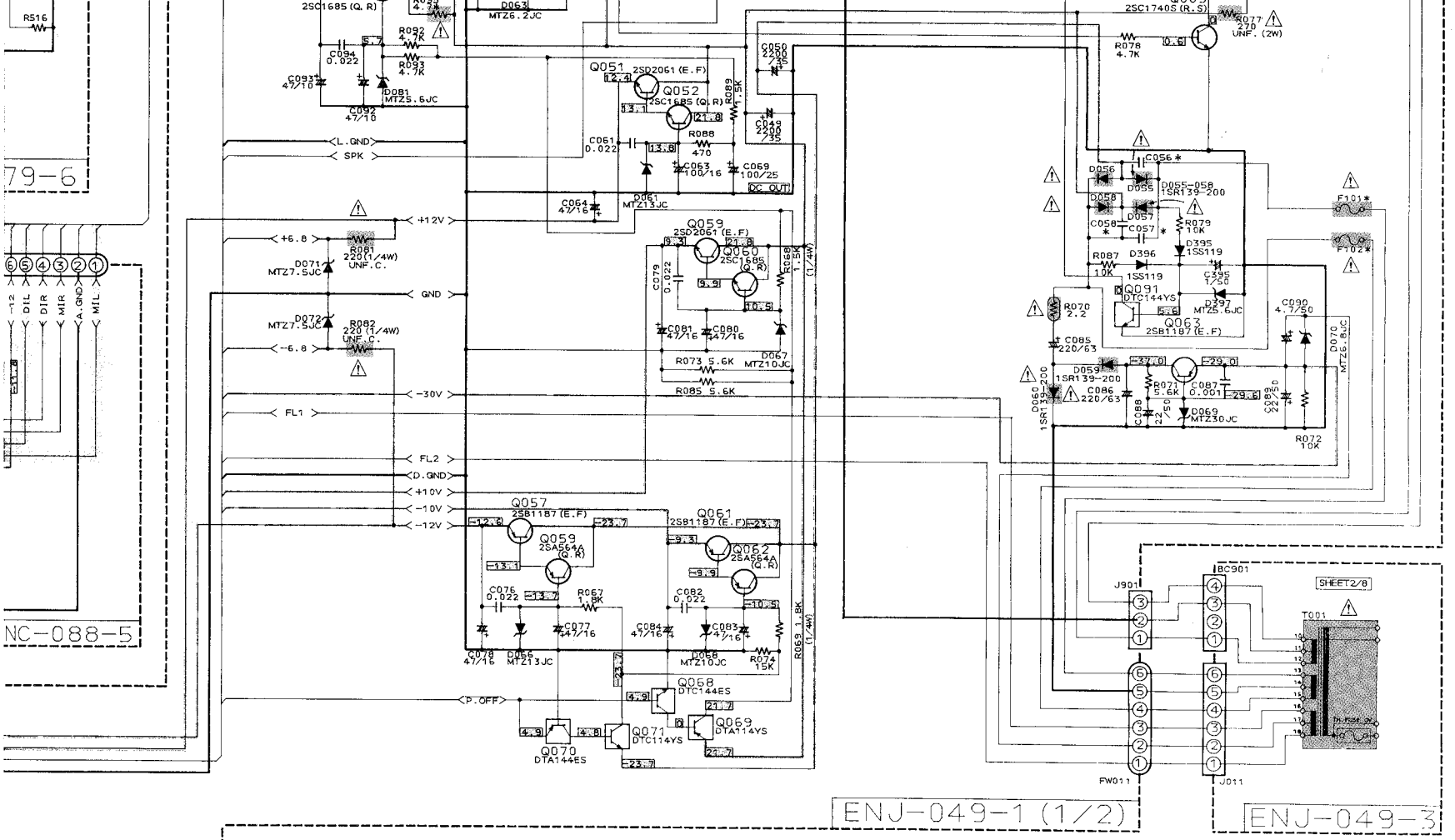
VERSION	J , C	U , A	E, EF, G, Gi BS, V, VX
C037 , C038	NONE	NONE	USED
C031 , C032	NONE	NONE	USED
C033 , C034	NONE	NONE	USED
C025 , C026	NONE	NONE	USED
C015 , C016	0.047	0.1	0.1
C017 , C018	SHORT	0.1	0.1
R041 , R017 R018 , R048 R091 , R094 R095 , R096 R541 , R542	UNF.C	UNF.F	UNF.F
R547 , R548	USED	SHORT	SHORT
R589 , R590	USED	NONE	NONE

VERSION	J , C	U , A	E, EF, G, Gi BS, V, VX
C051	0.01/100	0.01/100	0.1/100
C052 , C053	0.01/100	0.01/100	0.1/100
C056	0.01/100	0.01/100	0.1/100
C057 , C058	0.01/100	0.01/100	0.1/100
C501 , C502	100P	100P	330P
C531 , C532	100P	100P	270P
F101 , F102	1.6A-125V	T1.25A	T1.25A




TO ENC-088-4
FW021
MAIN.R
MAIN.L
ENJ-049-2
HEAD PHONES
J015
FW015
POWER AMP
IC001
STK4141V
SUR
PRT
TNR
P.OFF
+M5
+B5
PROTECTOR
SPEAKER TERMINAL
Lch
Rch
J001
J521
J802
FROM ENN-279-2
NC
D.GND
+5V
L
GND
RY001
RY002
Q055
2SD2061 (E.F)
Q092
DTC114YS
Q002
2SC1740S (R.S)
Q009
2SC1740S
Q010
2SA933S (R.S)
Q011
2SC1740S (R.S)
D005
MT212JC
D051-054
ERB12-02RKL1

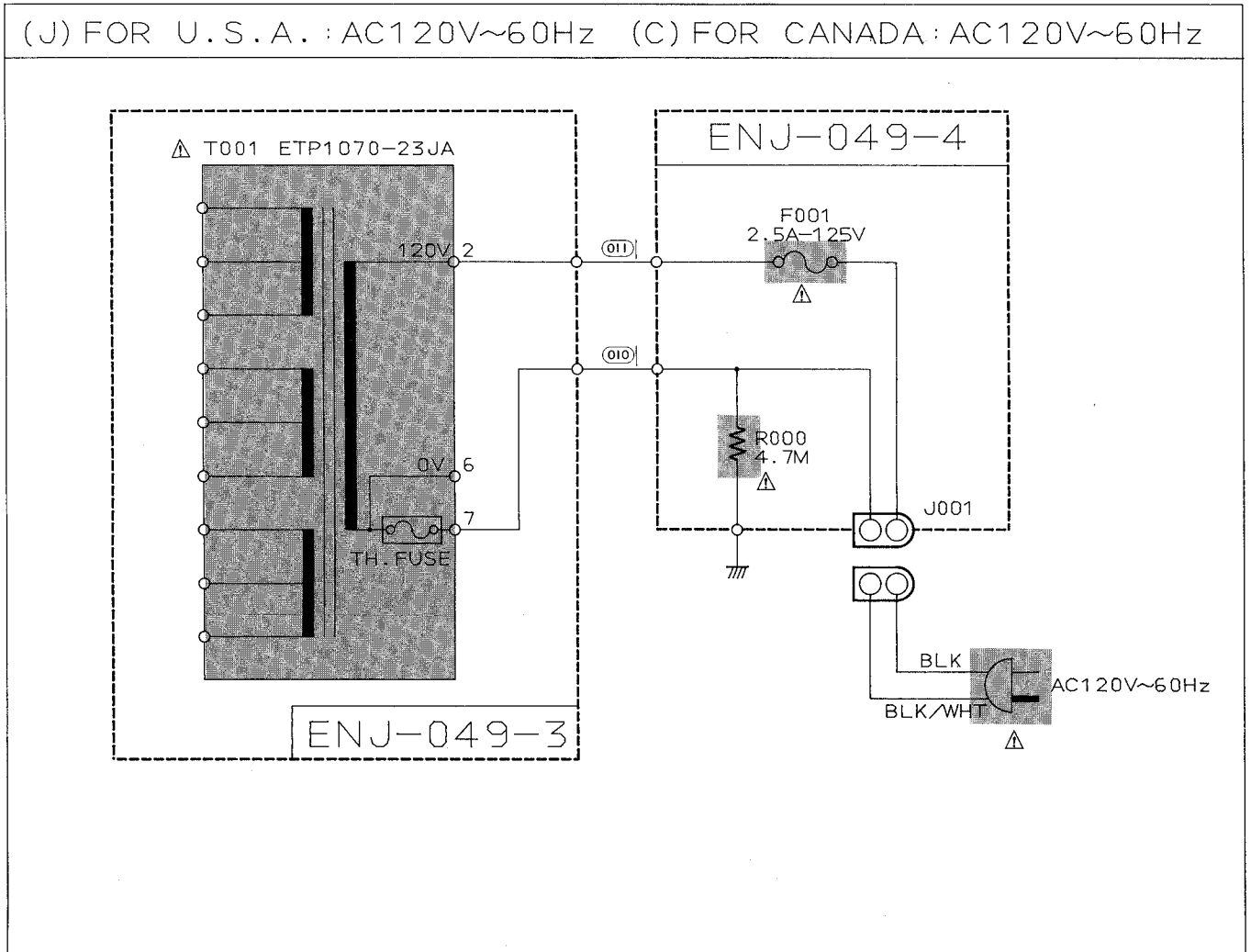

ENN-279-6
ENC-088-5
JA501
JB501
D.GND
+5V
STB
DATA
CLK
L
GND
R
+12V
-12V
PBL
PBR
TUL
TUR
R511 100K
C504 560P
R519 100K
R522
R521 22K
R516
2SC1685 (Q, R)
C094 0.022
C093 47/10
C092 47/10
L.GND
SPK
+6.8
-6.8
D071 MTZ7.5JC
D072 MTZ7.5JC
R081 220 1/
R082 220 1/
UNF.C
FL1
FW521
+12
-12
DIL
DIR
MIR
A.GND
MIL
VR581
MIC MIXING
MIC AMP
IC581
BA15218N
J581
R581 330
C581 4.7/25
C589 4.7/25
C591 0.001
C582 0.001
C594 0.047
R582 10K
C586
C585 100P
R583 27K
C590 4.7/25
R584
C583 100P
C589 47/25 *
C590 47/25 *
C584
R586
R585 330
C588
C587 10/25
PBL
PBR
A.GND
RECL
RECR
-12V
+12V
+M5V
+10V
D.GND
TO CASSETTE SECTION
SHEET3/8
R035 470
C679 2.2/50
Q001 2SD2144S (V.W)
R039 10K
MUT
Q005 DTA144ES
R040 10K
R030 470
Q004 2SD2144S (V.W)
C680 2.2/50
R096 4.7 (1/4W) *
RECL
RECR
-6.8
+6.8
INR
INL
GND
NC
NC
NC
SUR
PRT
P.OFF
SPK
INR
MUT
CLK
DATA
STB
+5V
FL1
FL2
-30V
+85
+M5
D.GND
+5V
D.GND
-12V
+12V
-10V
+10V
+12V
+5V
TUL
GND
TUR
JB201
TO ENC-088-1
JB202
TO ENC-088-1
JB203
TO ENC-088-1
J751
TO ENN-279-1
JA103
TO ENA-116 or ENA-117



Notes:

1. ——— indicates +B power supply.
2. ····· indicates −B power supply.
3. ▒▒▒ indicates signal path.
4. ▭ shows voltage.
5. When replacing the parts in the shaded area (▒▒▒) and those marked with ⚠, be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram. The design and contents are subject to change without notice.

■ POWER TRANS & VOLTAGE SELECTOR SECTION



)A : AC120V~60Hz

9-4

J001

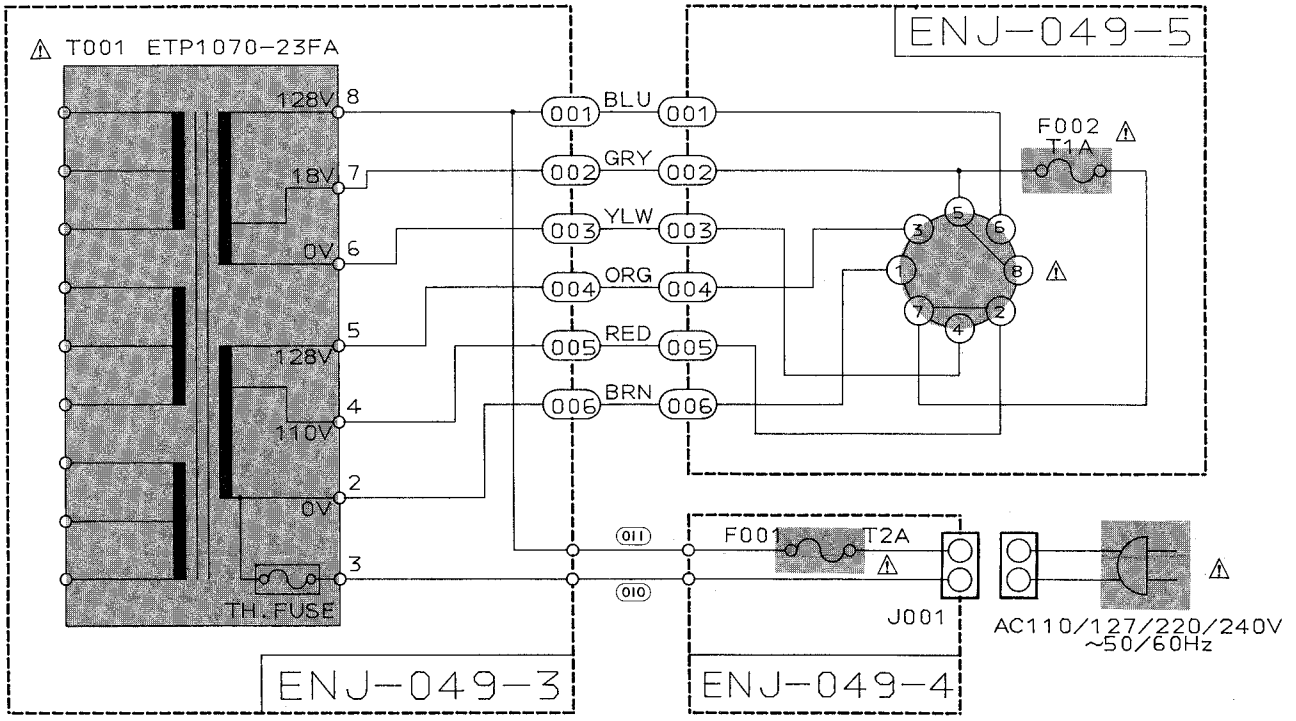
BLK

BLK/WHT

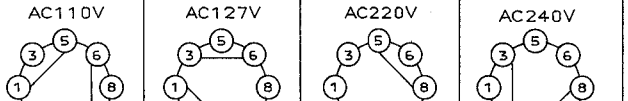
AC120V~60Hz

⚠

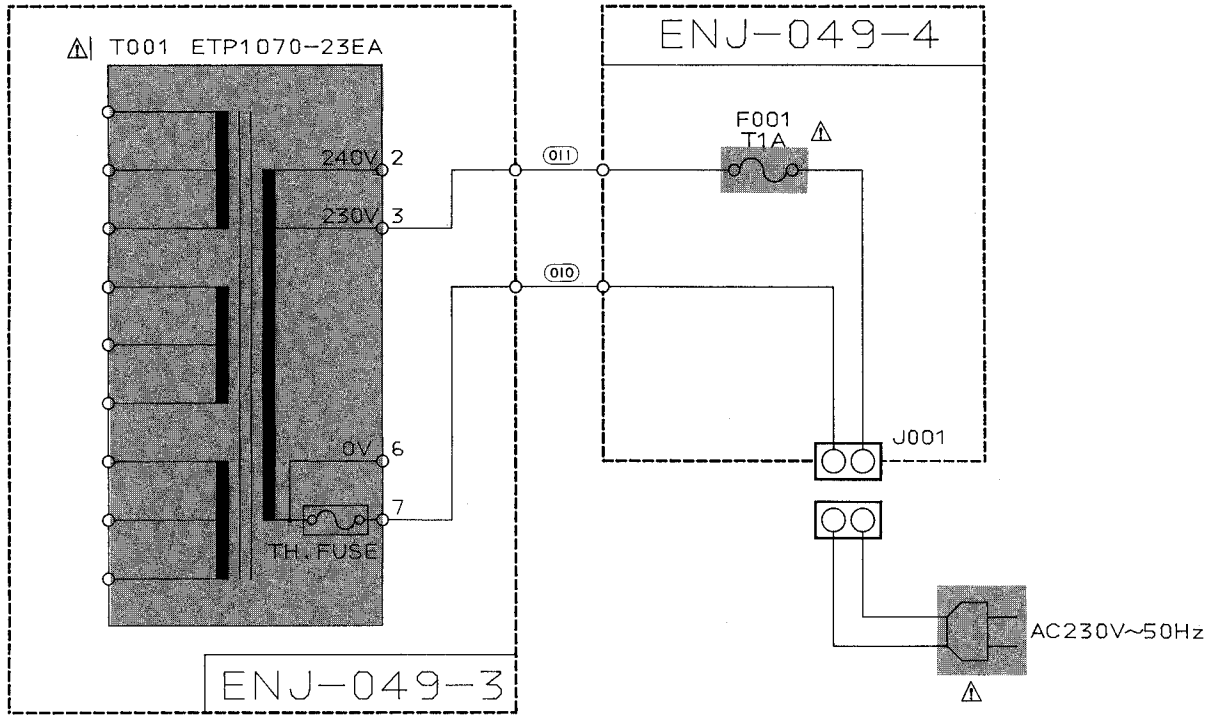
(U) FOR OTHER COUNTRES : AC110V/127/220V/240V~50Hz/60Hz



VOLTAGE SELECTOR LOCATION

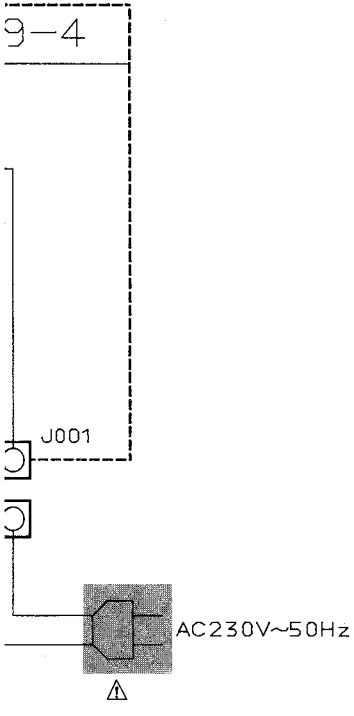


(E), (EF), (V), (VX) FOR CONTINTAL EUROPE
(G) FOR F.R. GERMANY (GI) FOR ITALY : AC230V~50Hz

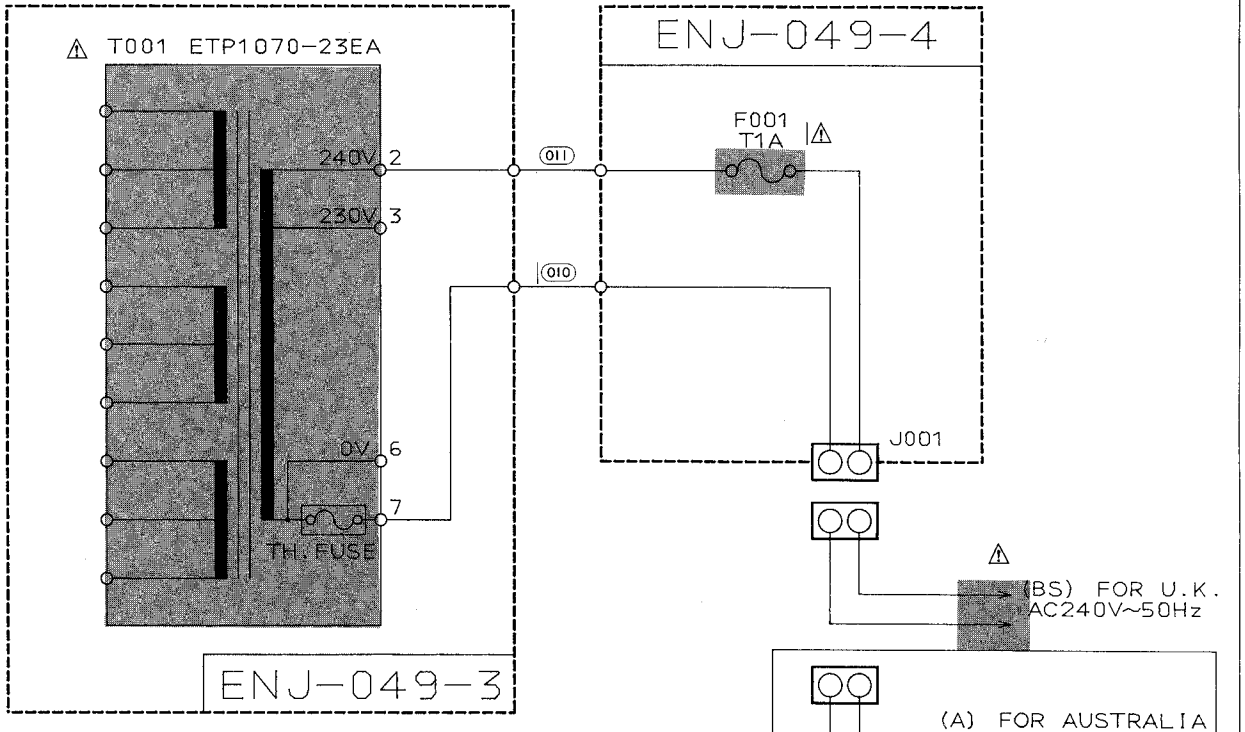


(BS)
(A)

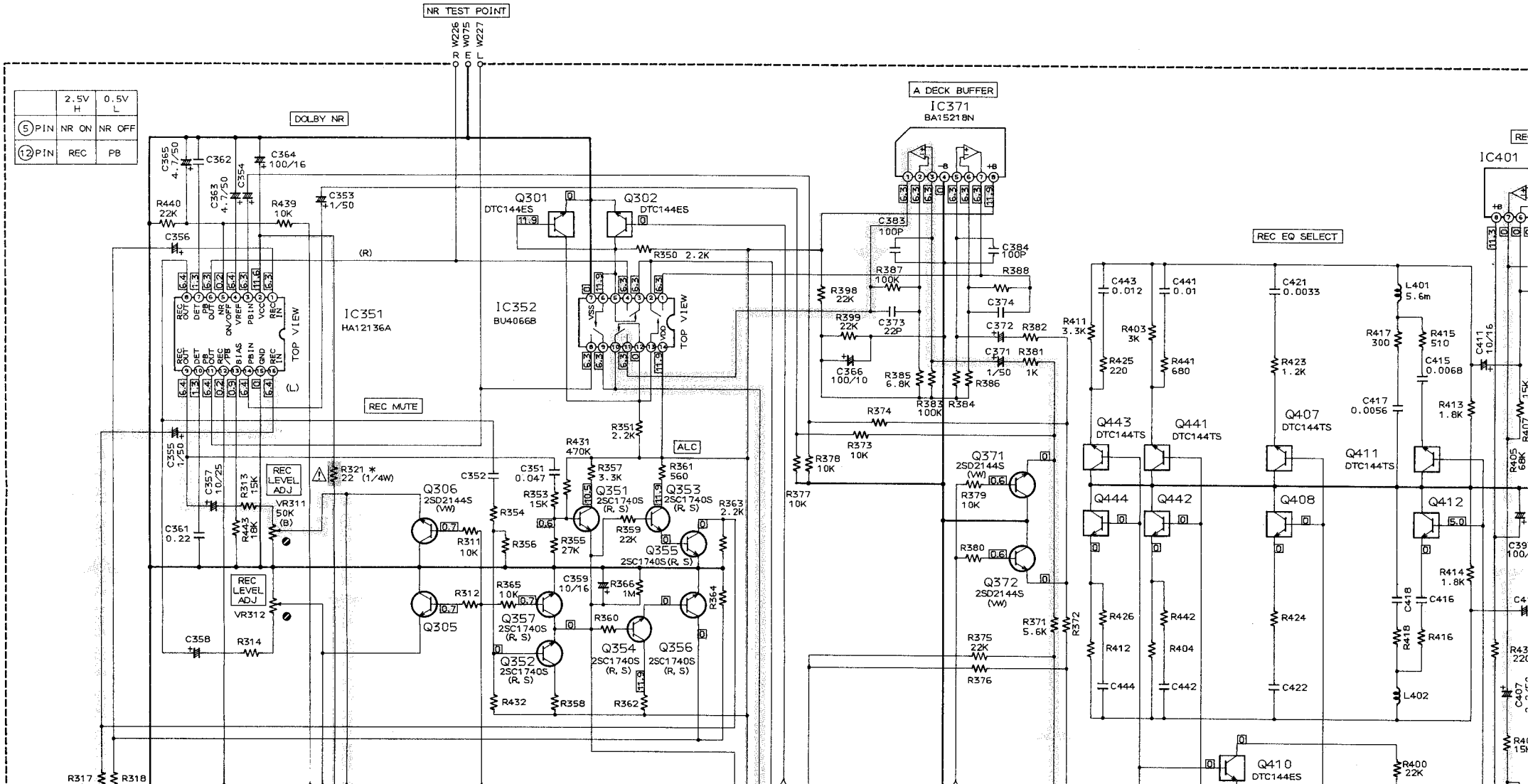
AC230V~50Hz

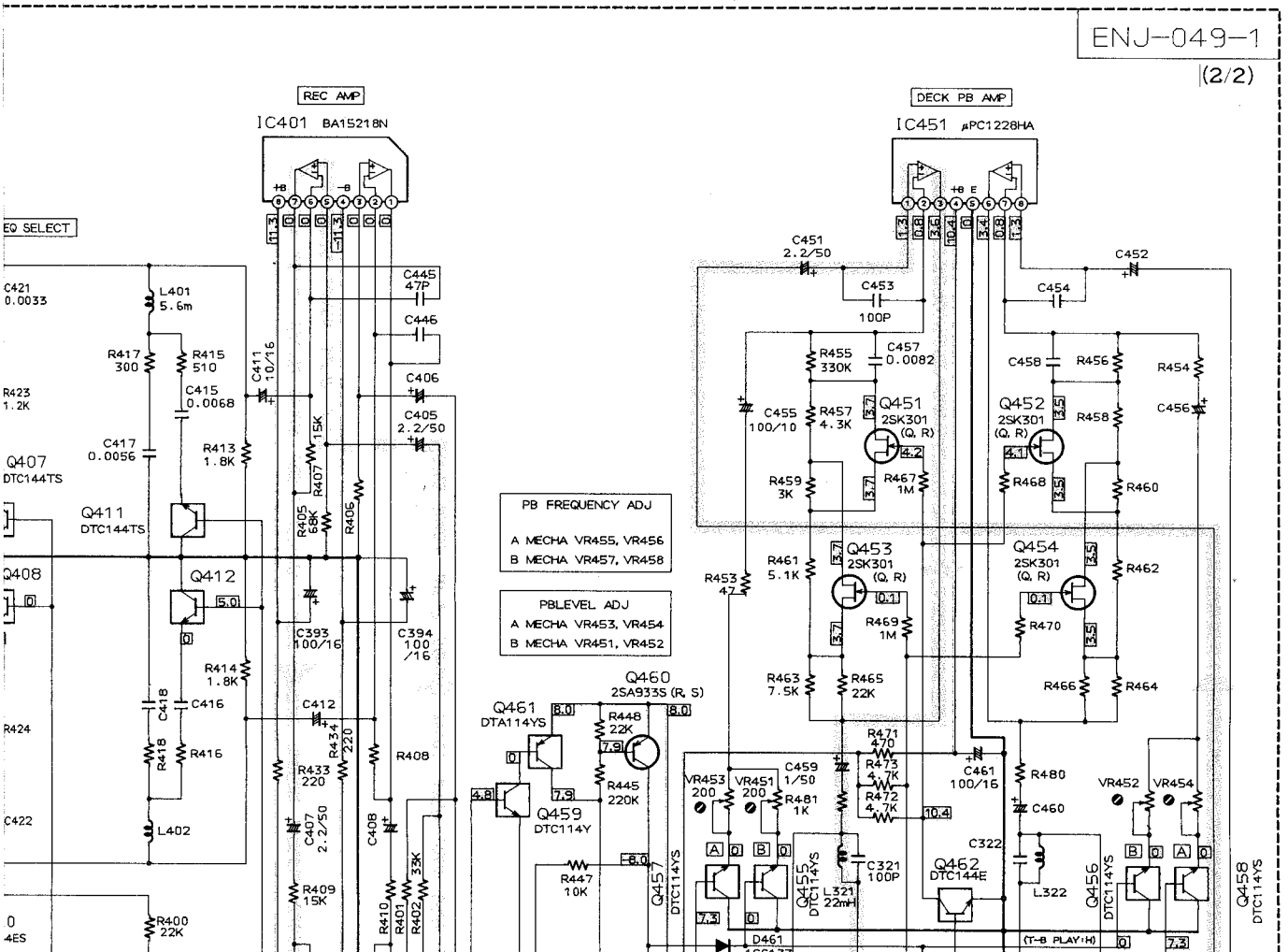


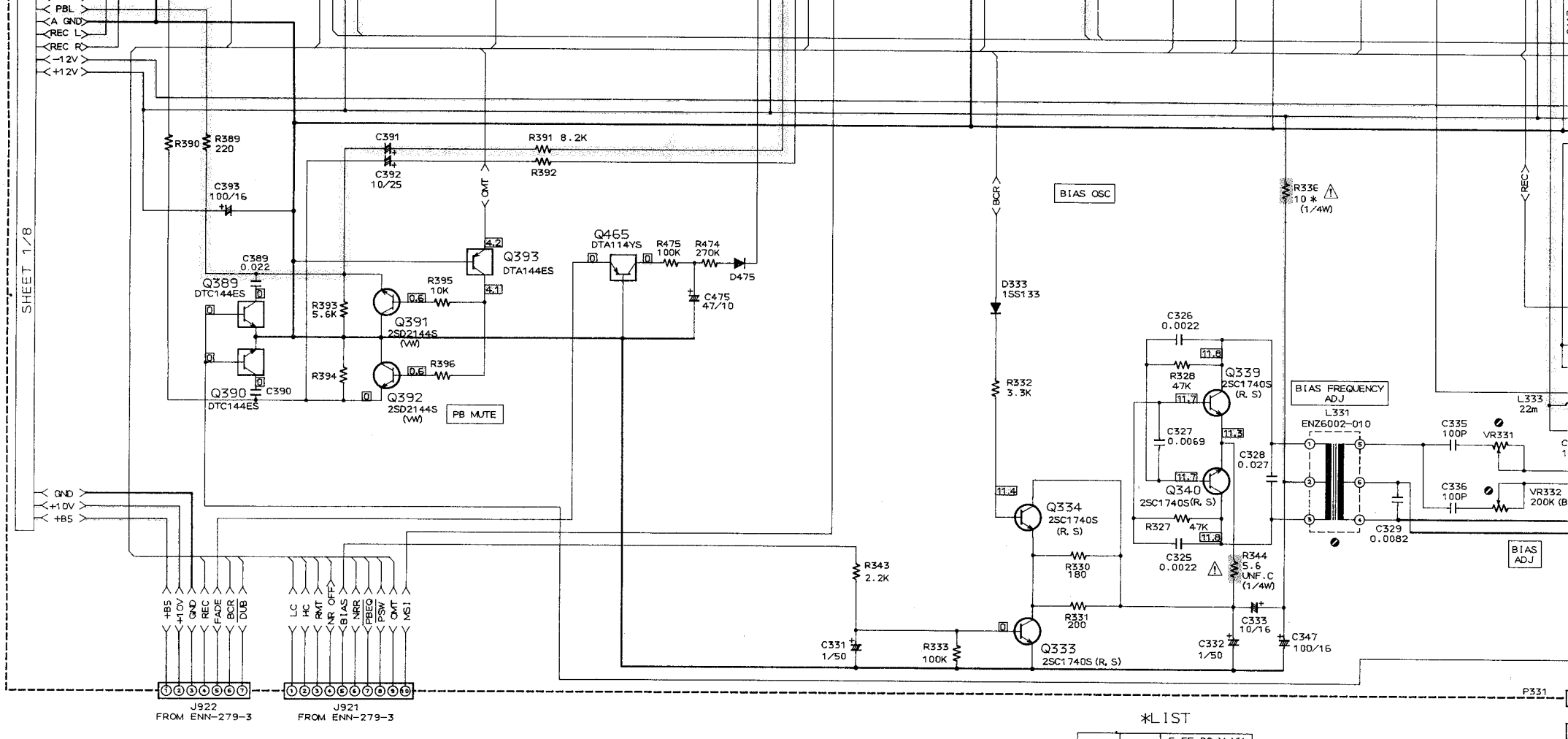
(BS) FOR U.K. : AC240V~50Hz
(A) FOR AUSTRALIA : AC240V~50Hz



■ CASSETE DECK SECTION

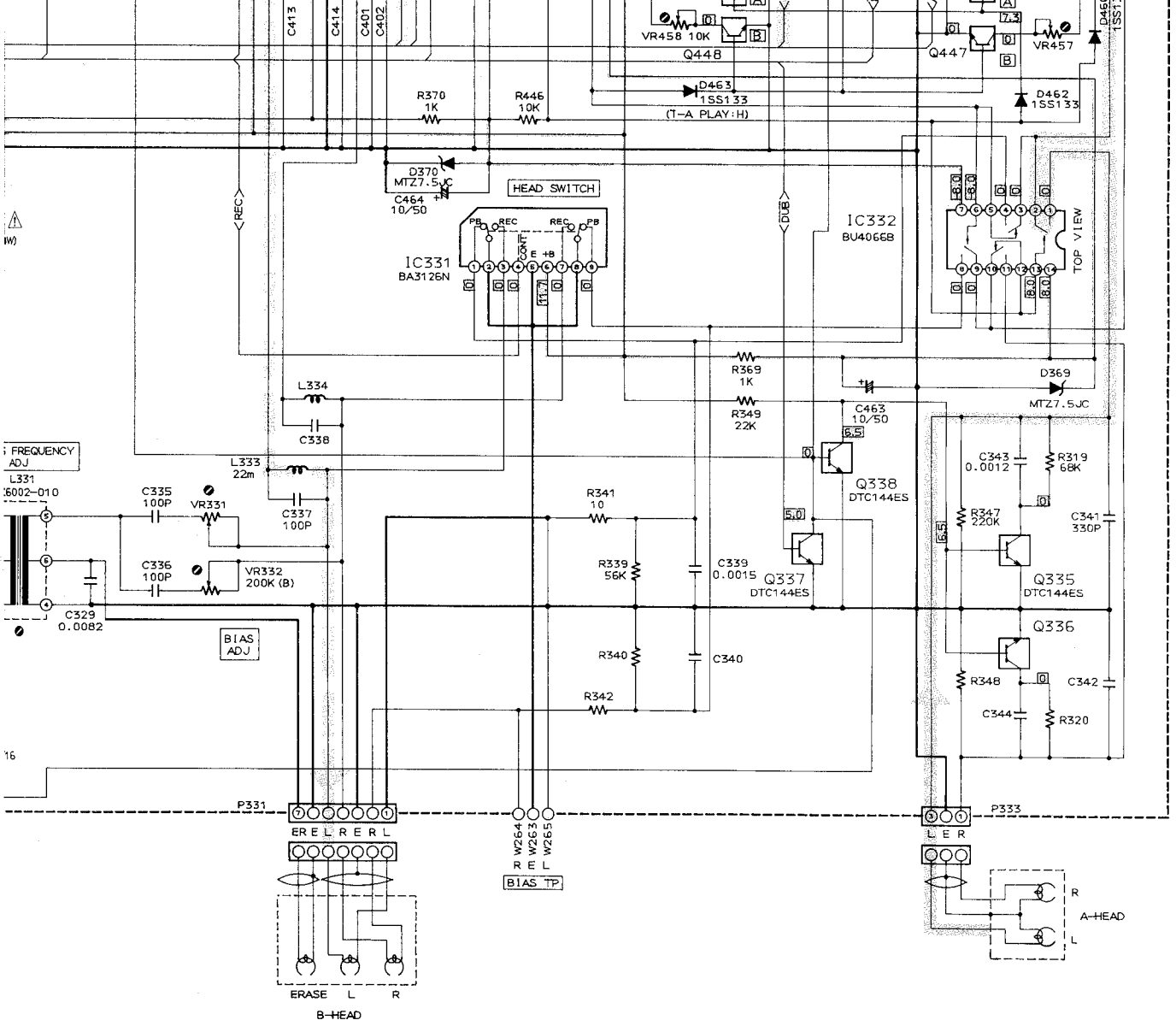



ENJ-049-1
(2/2)
REC AMP
IC401 BA15218N
DECK PB AMP
IC451 μPC1228HA
EQ SELECT
PB FREQUENCY ADJ
A MECHA VR455, VR456
B MECHA VR457, VR458
PBLEVEL ADJ
A MECHA VR453, VR454
B MECHA VR451, VR452
L401 5.6m
L402
L321 22mH
L322
Q407 DTC144TS
Q411 DTC144TS
Q412
Q451 2SK301 (Q, R)
Q452 2SK301 (Q, R)
Q453 2SK301 (Q, R)
Q454 2SK301 (Q, R)
Q455 DTC114YS
Q456 DTC114YS
Q457 DTC114YS
Q458 DTC114YS
Q459 DTC114Y
Q460 2SA933S (R, S)
Q461 DTA114YS
Q462 DTC144E
D461
(T-B PLAY:H)
C393 100/16
C394 100/16
C405 2.2/50
C406
C407 2.2/50
C408
C411 10/16
C412
C416
C418
C421 0.0033
C422
C445 47P
C446
C451 2.2/50
C452
C453 100P
C454
C455 100/10
C456
C457 0.0082
C458
C459 1/50
C460
C461 100/16
R400 22K
R401 33K
R402
R405 68K
R406
R407 15K
R408
R409 15K
R410
R413 1.8K
R414 1.8K
R415 510
R416
R417 300
R418
R423 1.2K
R424
R433 220
R434 220
R445 220K
R447 10K
R448 22K
R453 47
R455 330K
R456
R457 4.3K
R458
R459 3K
R460
R461 5.1K
R462
R463 7.5K
R464
R465 22K
R466
R467 1M
R468
R469 1M
R470
R471 470
R472 4.7K
R473 4.7K
R480
VR451 200
VR452
VR453 200
VR454

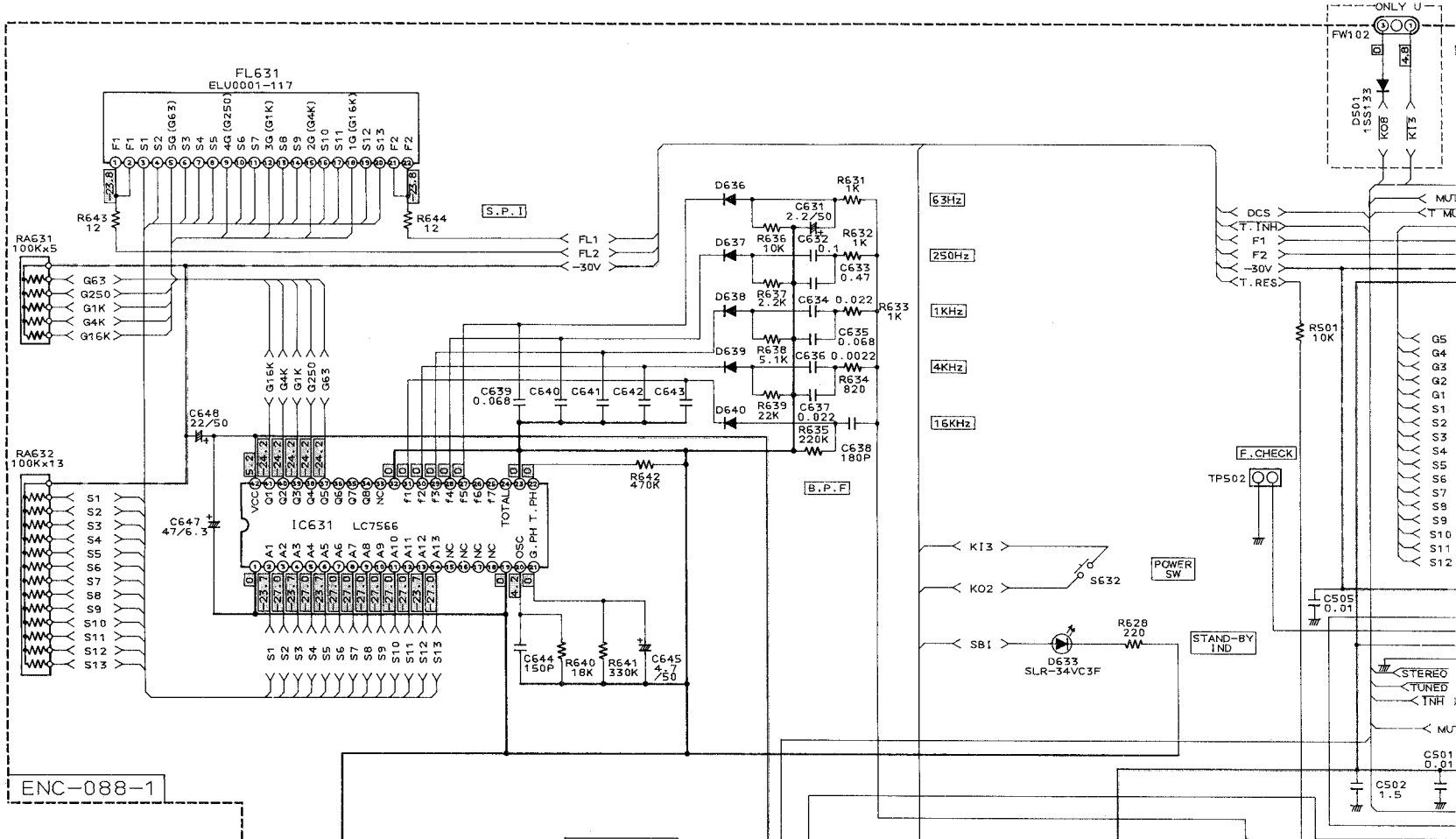


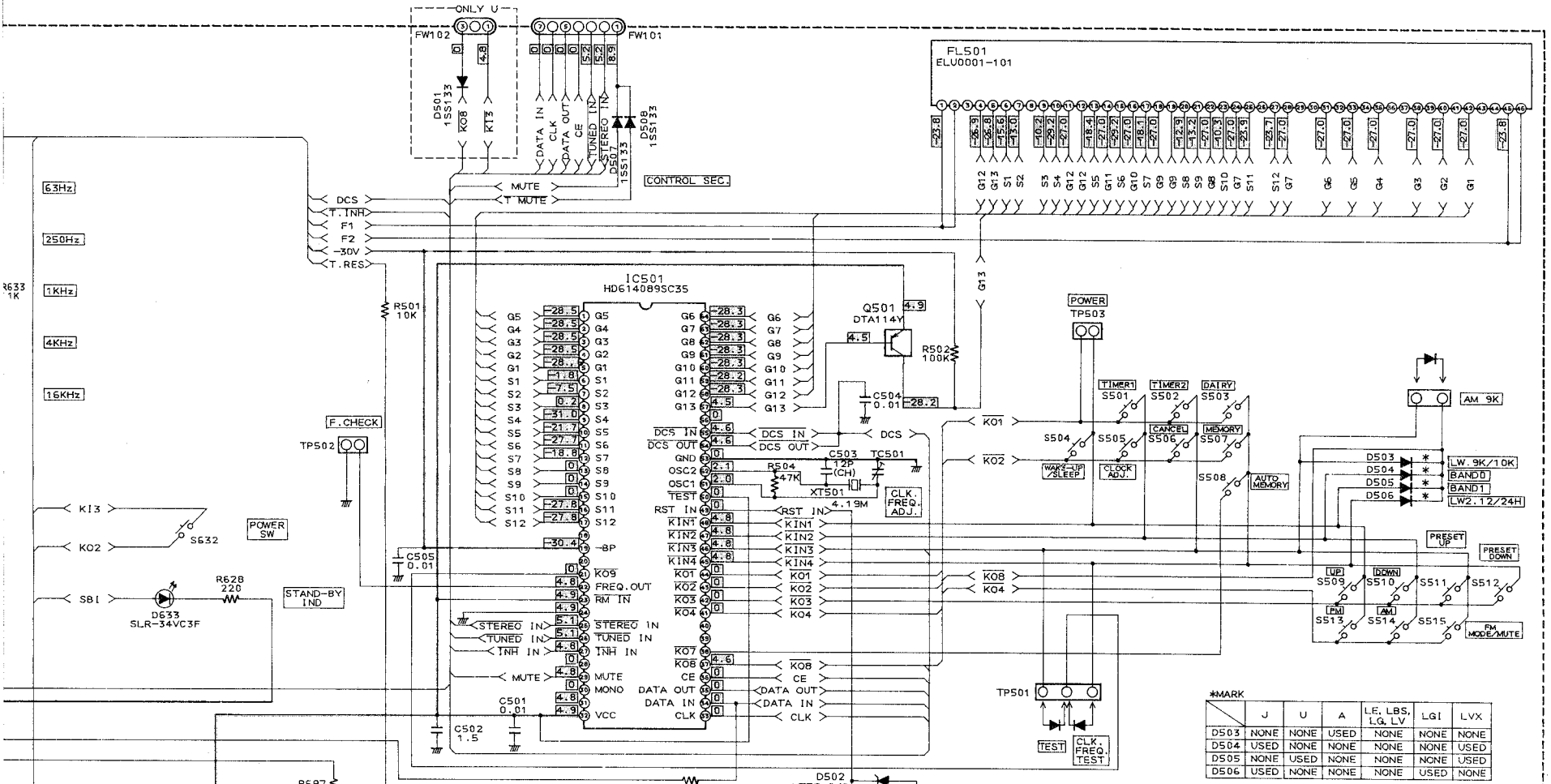
*LIST

	J, C	E, EF, BS, V, VX G, Gi, U, A
R336	UNF.C	UNF.F
R321	UNF.C	UNF.F


C413
C414
C401
C402
VR458 10K
Q448
Q447
VR457
D463
1SS133
(T-A PLAY:H)
D462
1SS133
R370
1K
R446
10K
D370
MTZ7.5JC
C464
10/50
HEAD SWITCH
REC
DUB
PB
REC
REC
PB
CONT
E +B
IC331
BA3126N
IC332
BU4066B
TOP VIEW
R369
1K
R349
22K
D369
MTZ7.5JC
C463
10/50
L334
C338
L333
22m
FREQUENCY
ADJ
L331
C335
100P
VR331
C337
100P
C336
100P
VR332
200K (B)
C329
0.0082
BIAS
ADJ
R341
10
R339
56K
C339
0.0015
Q337
DTC144ES
R340
C340
R342
Q338
DTC144ES
C343
0.0012
R319
68K
R347
220K
C341
330P
Q335
DTC144ES
Q336
R348
C342
C344
R320
P331
E R E L R E R L
P333
L E R
W264
W263
W265
R E L
BIAS TP
ERASE L R
B-HEAD
R
L
A-HEAD

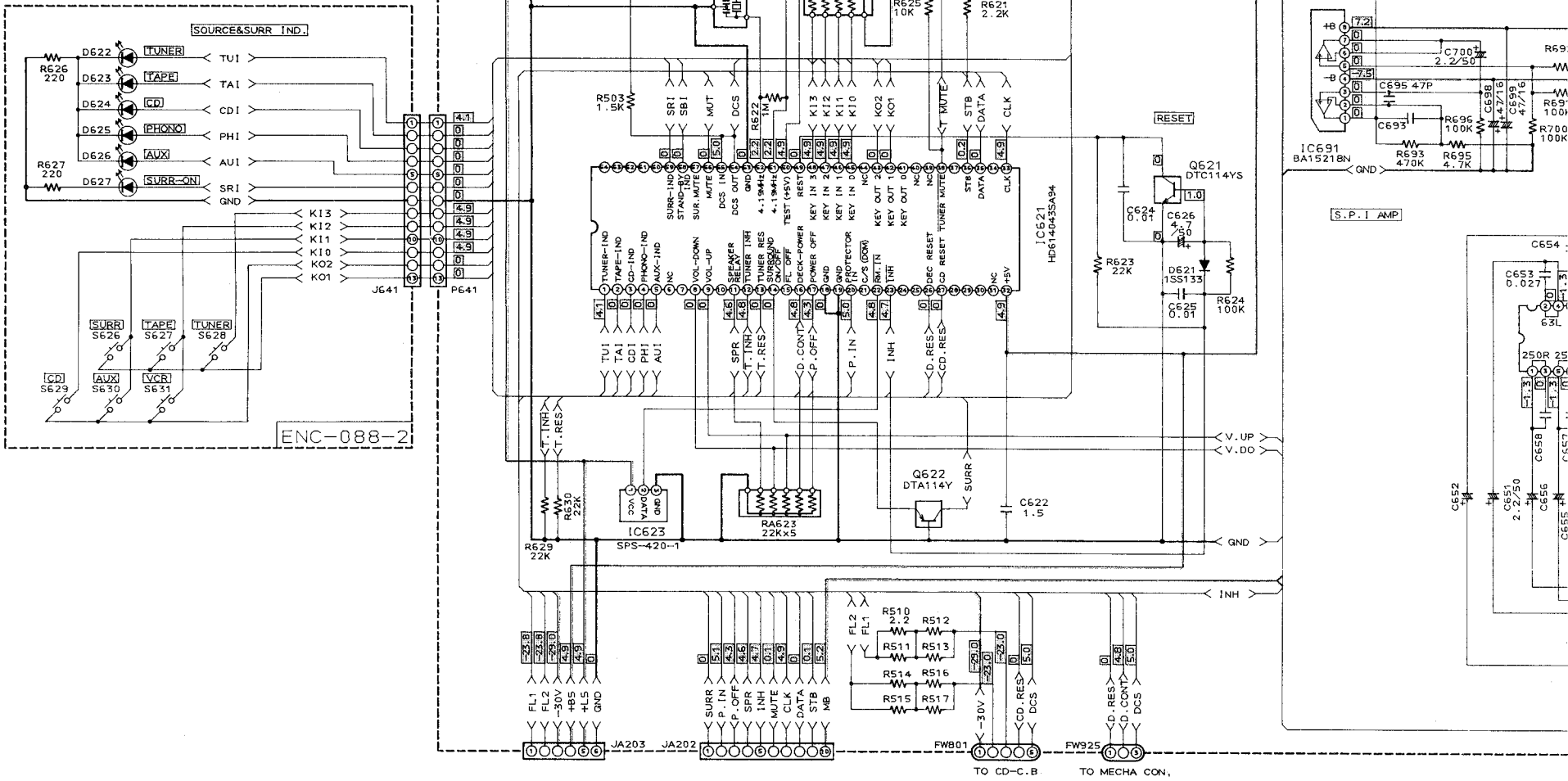
■ SYSTEM CONTROL & SEA SECTION

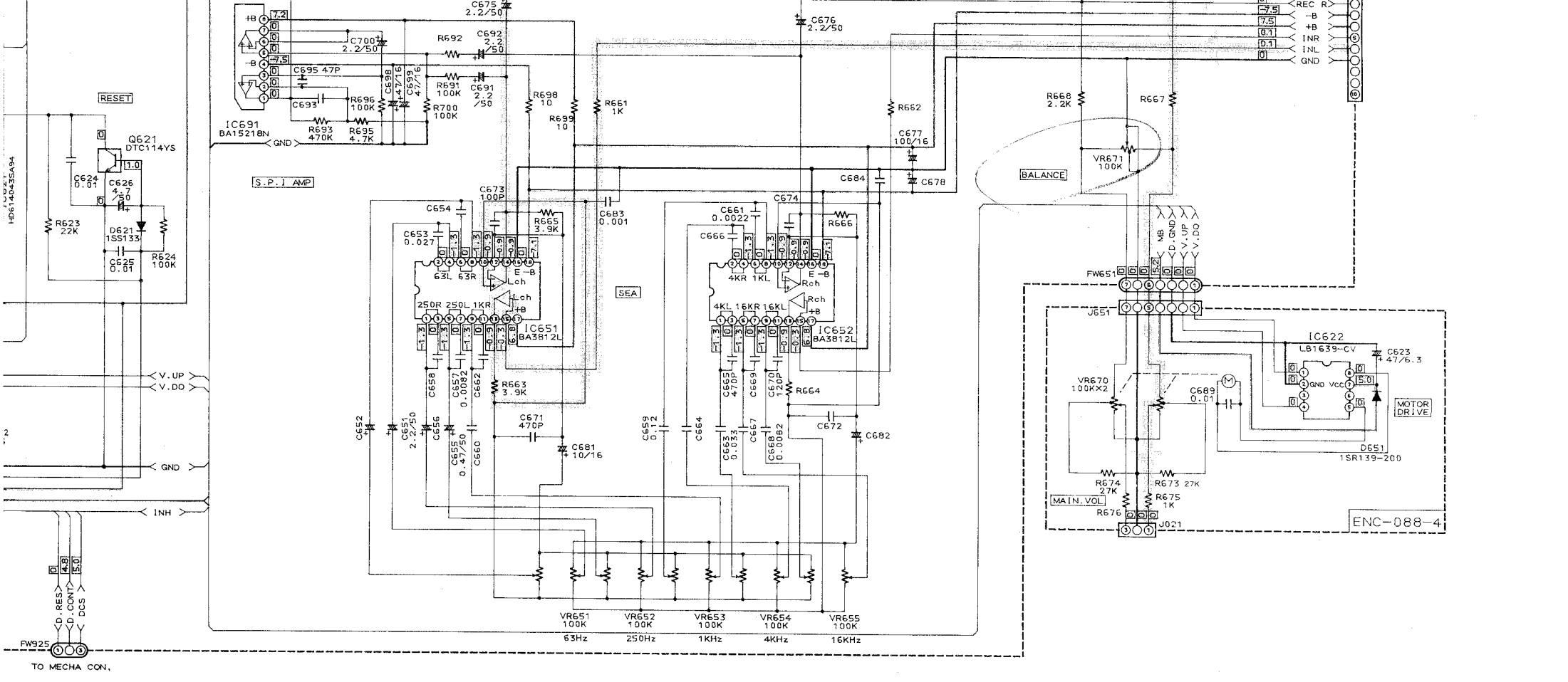




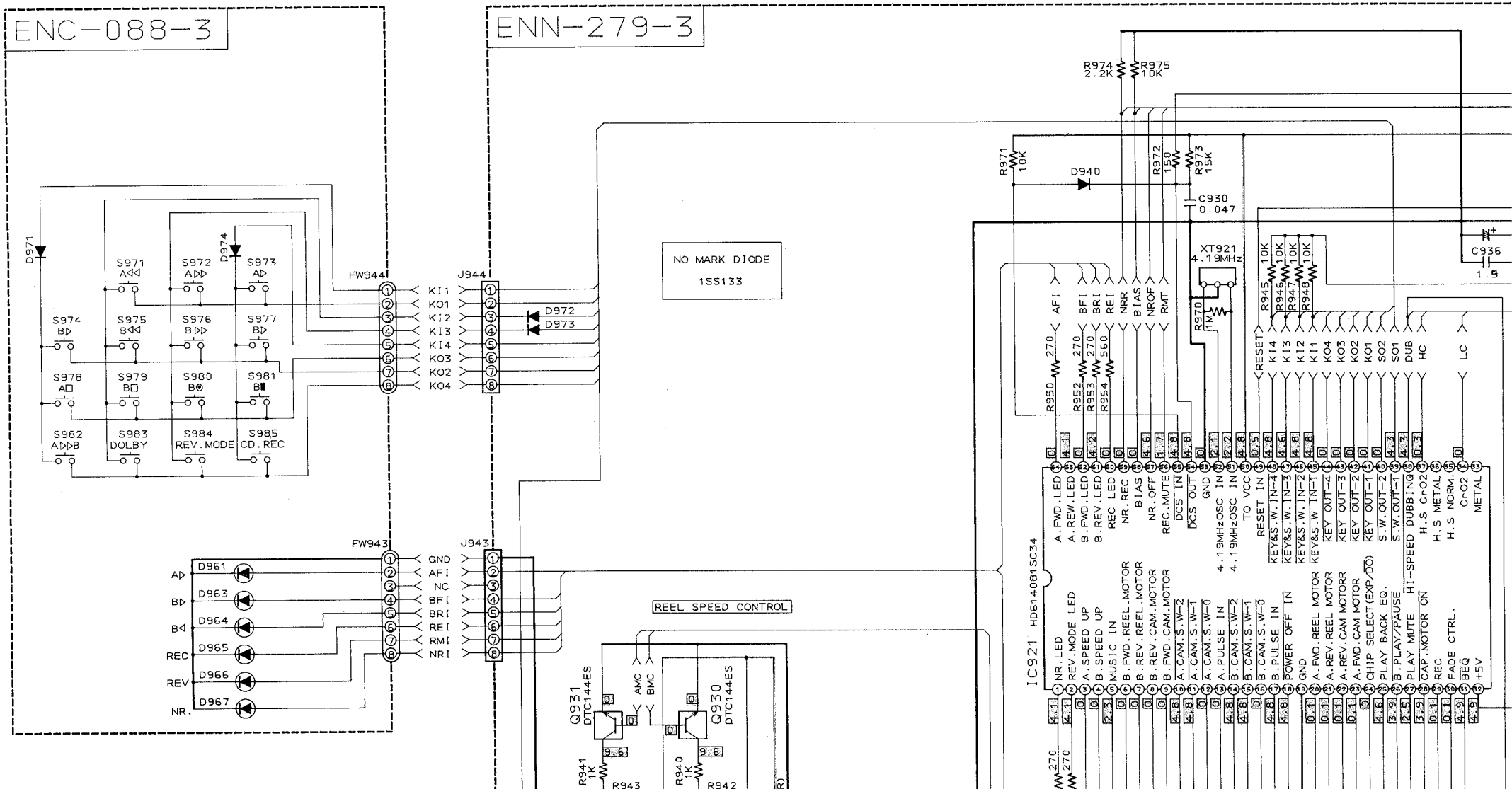
*MARK

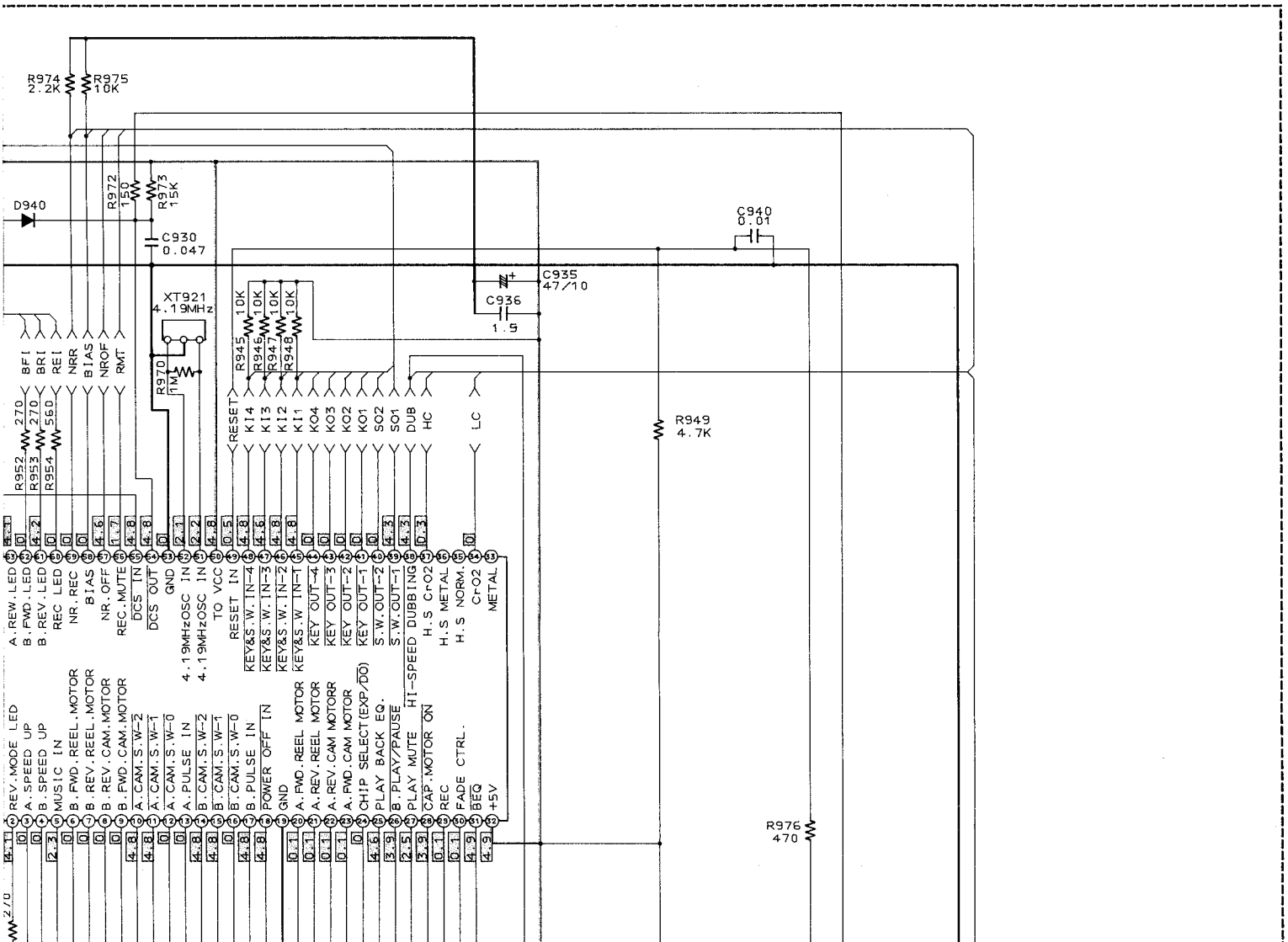
	J	U	A	LE, LBS, LG, LV	LGI	LVX
D503	NONE	NONE	USED	NONE	NONE	NONE
D504	USED	NONE	NONE	NONE	NONE	USED
D505	NONE	USED	NONE	NONE	NONE	USED
D506	USED	NONE	NONE	NONE	USED	NONE

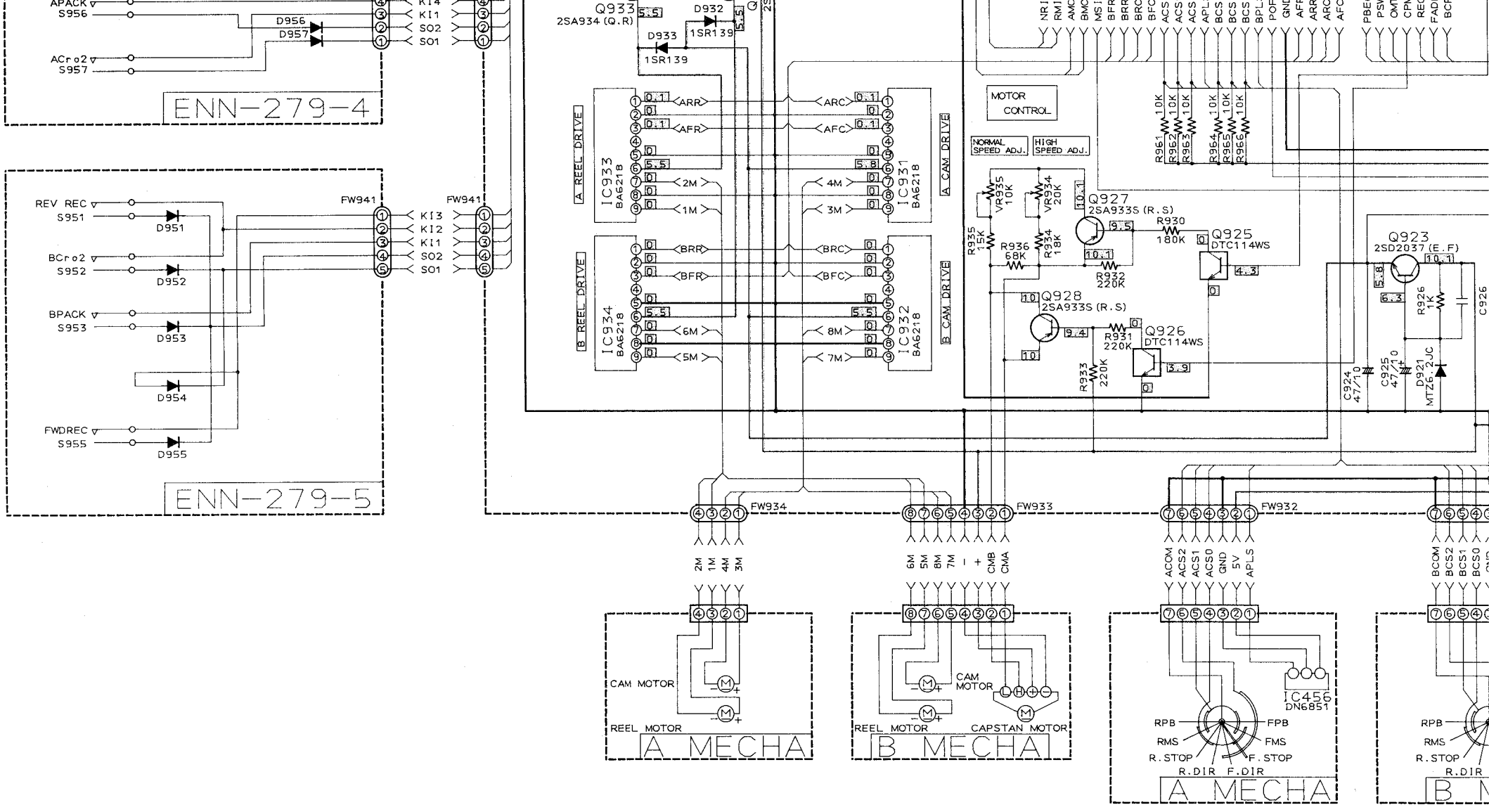

SOURCE&SURR IND.
D622
TUNER
TUI
D623
TAPE
TAI
D624
CD
CDI
D625
PHONO
PHI
D626
AUX
AUI
D627
SURR-ON
SRI
GND
R626 220
R627 220
KI3
KI2
KI1
KI0
KO2
KO1
J641
P641
SURR S626
TAPE S627
TUNER S628
CD S629
AUX S630
VCR S631
ENC-088-2
IC621 HD614043S94
IC623 SPS-420-1
RA623 22Kx5
Q621 DTC114YS
Q622 DTA114Y
RESET
S.P.I AMP
IC691 BA15218N
V.UP
V.DO
GND
INH
TO CD-C.B
TO MECHA CON,
JA203
JA202
FW801
FW925

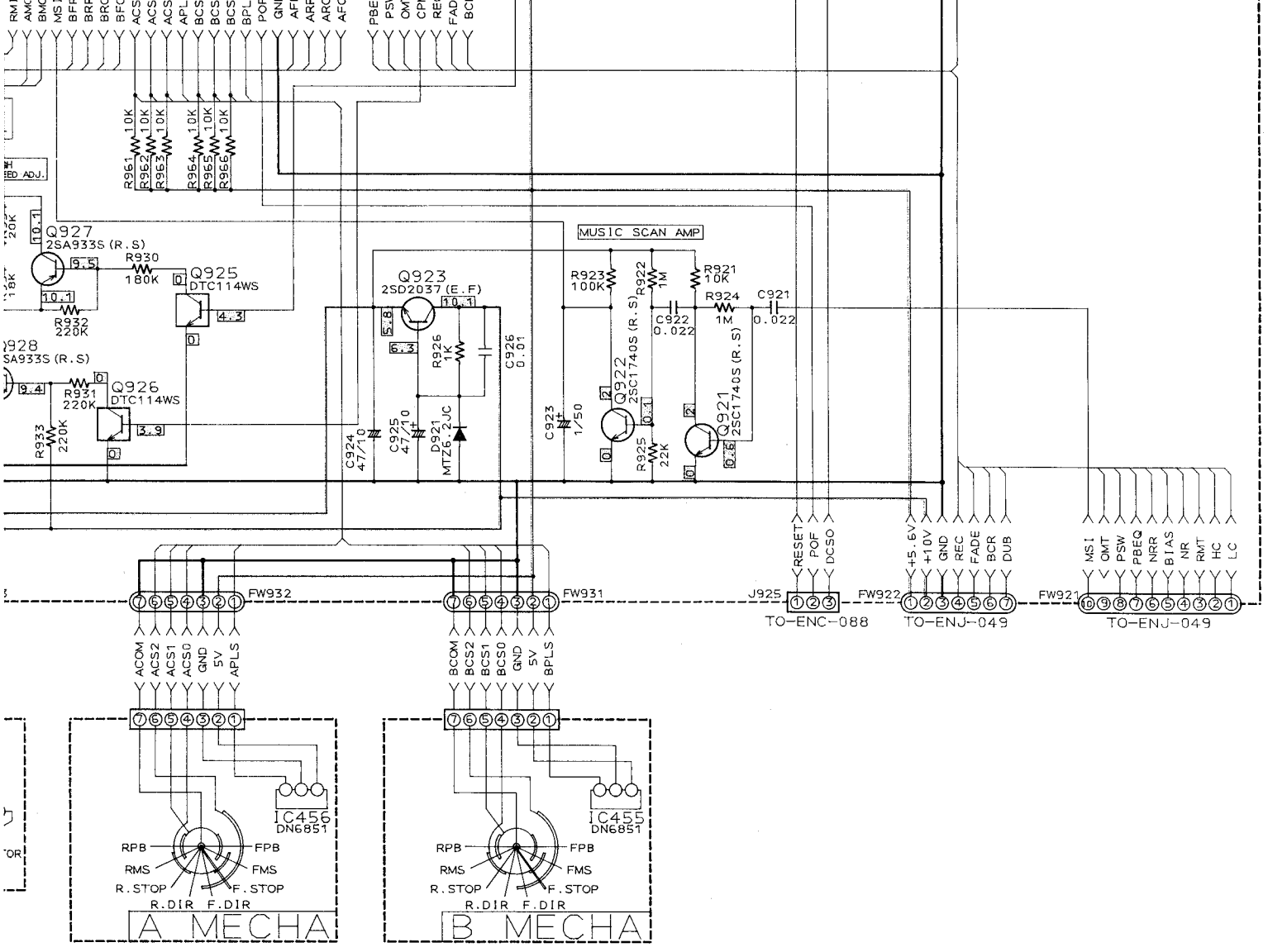

RESET
Q621
DTC114YS
C624
0.01
C626
4.7
/50
D621
1SS133
C625
0.01
R624
100K
R623
22K
V.UP
V.DO
GND
INH
D.RES
D.CONT
DCS
FW925
TO MECHA CON,
IC691
BA15218N
GND
C700
2.2/50
C695 47P
C693
R696
100K
C698
4.7/16
C699
4.7/16
R693
470K
R695
4.7K
R692
C692
2.2
/50
R691
100K
C691
2.2
/50
R700
100K
R698
10
R699
10
R661
1K
C675
2.2/50
C676
2.2/50
R662
C677
100/16
C678
C684
S.P.I AMP
C673
100P
C654
C653
0.027
R665
3.9K
C683
0.001
63L 63R
E-B
Lch
+B
250R 250L 1KR
IC651
BA3812L
SEA
C661
0.0022
C674
R666
C666
4KR 1KL
Rch
4KL 16KR 16KL
IC652
BA3812L
C658
C657
0.0082
C662
R663
3.9K
C652
C651
2.2/50
C656
C655
0.47/50
C660
C671
470P
C681
10/16
C659
0.12
C664
C665
470P
C669
C670
120P
R664
C672
C682
C663
0.033
C667
C668
0.0082
VR651
100K
63Hz
VR652
100K
250Hz
VR653
100K
1KHz
VR654
100K
4KHz
VR655
100K
16KHz
REC R
-B
+B
INR
INL
GND
R668
2.2K
R667
VR671
100K
BALANCE
MB
D.GND
V.UP
V.DO
FW651
J651
IC622
LB1639-CV
C623
47/6.3
VR670
100KX2
C689
0.01
GND
VCC
MOTOR
DRIVE
D651
1SR139-200
R674
27K
R673 27K
MAIN.VOL
R675
1K
R676
J021
ENC-088-4

■ DECK CONTROL SECTION



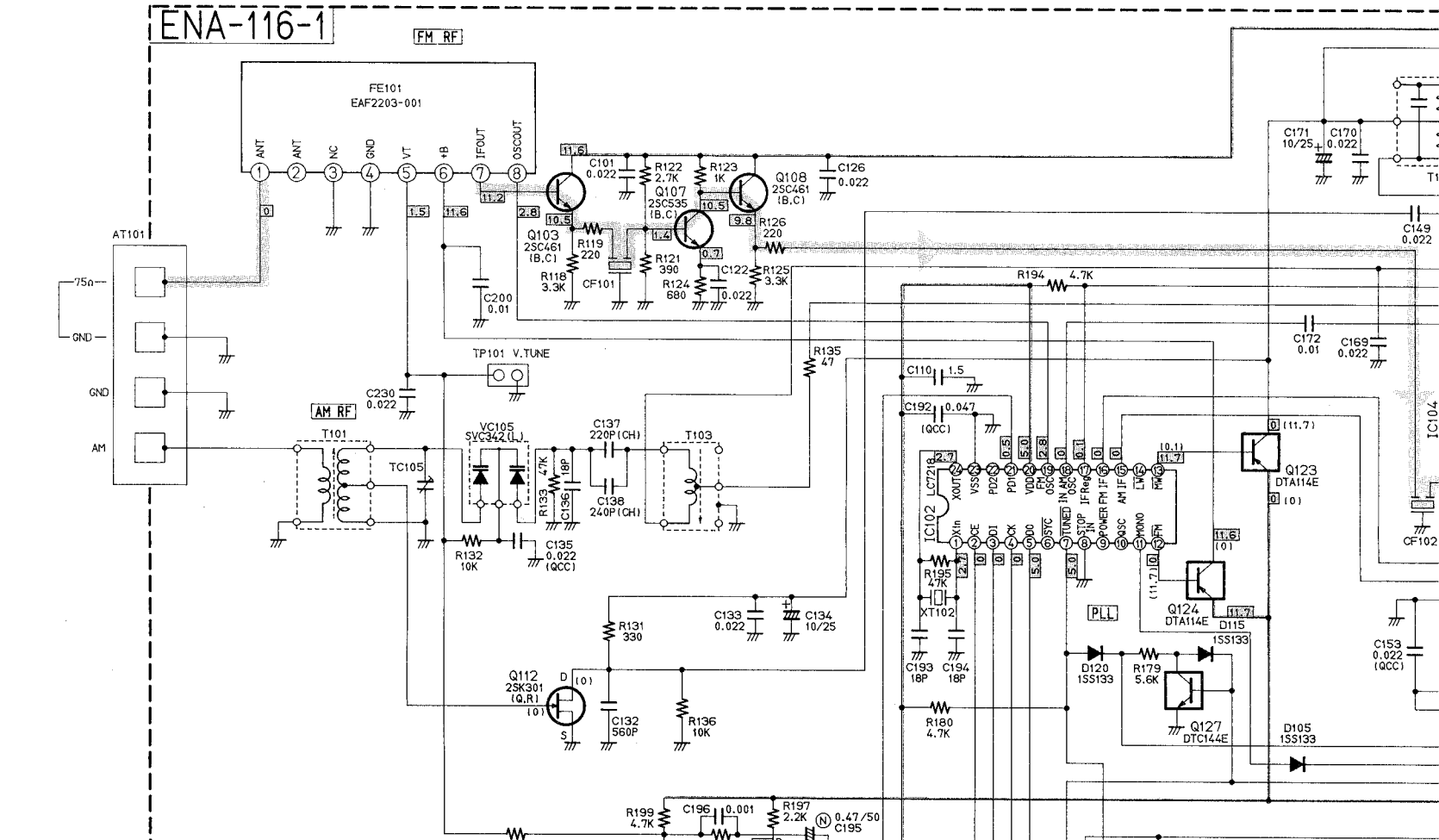

R974 2.2K
R975 10K
D940
R972 150
R973 15K
C930 0.047
XT921 4.19MHz
R970 1M
C940 0.01
C935 47/10
C936 1.5
R945 10K
R946 10K
R947 10K
R948 10K
R949 4.7K
R976 470
R952 270
R953 270
R954 560
BFI
BRI
REI
NRR
BIAS
NROF
RMT
RESET
K14
K13
K12
K11
KO4
KO3
KO2
KO1
SO2
SO1
DUB
HC
LC
A.REW.LED
B.FWD.LED
B.REV.LED
REC LED
NR.REC
BIAS
NR.OFF
REC.MUTE
DCS IN
DCS OUT
GND
4.19MHzOSC IN
4.19MHzOSC IN
TO VCC
RESET IN
KEY&S.W.IN-4
KEY&S.W.IN-3
KEY&S.W.IN-2
KEY&S.W.IN-1
KEY OUT-4
KEY OUT-3
KEY OUT-2
KEY OUT-1
S.W.OUT-2
S.W.OUT-1
DUBBING
H.S CrO2
H.S METAL
H.S NORM.
CrO2
METAL
REV.MODE LED
A.SPEED UP
B.SPEED UP
MUSIC IN
B.FWD.REEL.MOTOR
B.REV.REEL.MOTOR
B.REV.CAM.MOTOR
B.FWD.CAM.MOTOR
A.CAM.S.W-2
A.CAM.S.W-1
A.CAM.S.W-0
A.PULSE IN
B.CAM.S.W-2
B.CAM.S.W-1
B.CAM.S.W-0
B.PULSE IN
POWER OFF IN
GND
A.FWD.REEL MOTOR
A.REV.REEL MOTOR
A.REV.CAM MOTORR
A.FWD.CAM MOTOR
CHIP SELECT(EXP/DO)
PLAY BACK EQ.
B.PLAY/PAUSE
PLAY MUTE
CAP.MOTOR ON
REC
FADE CTRL.
BEQ
+5V
HI-SPEED

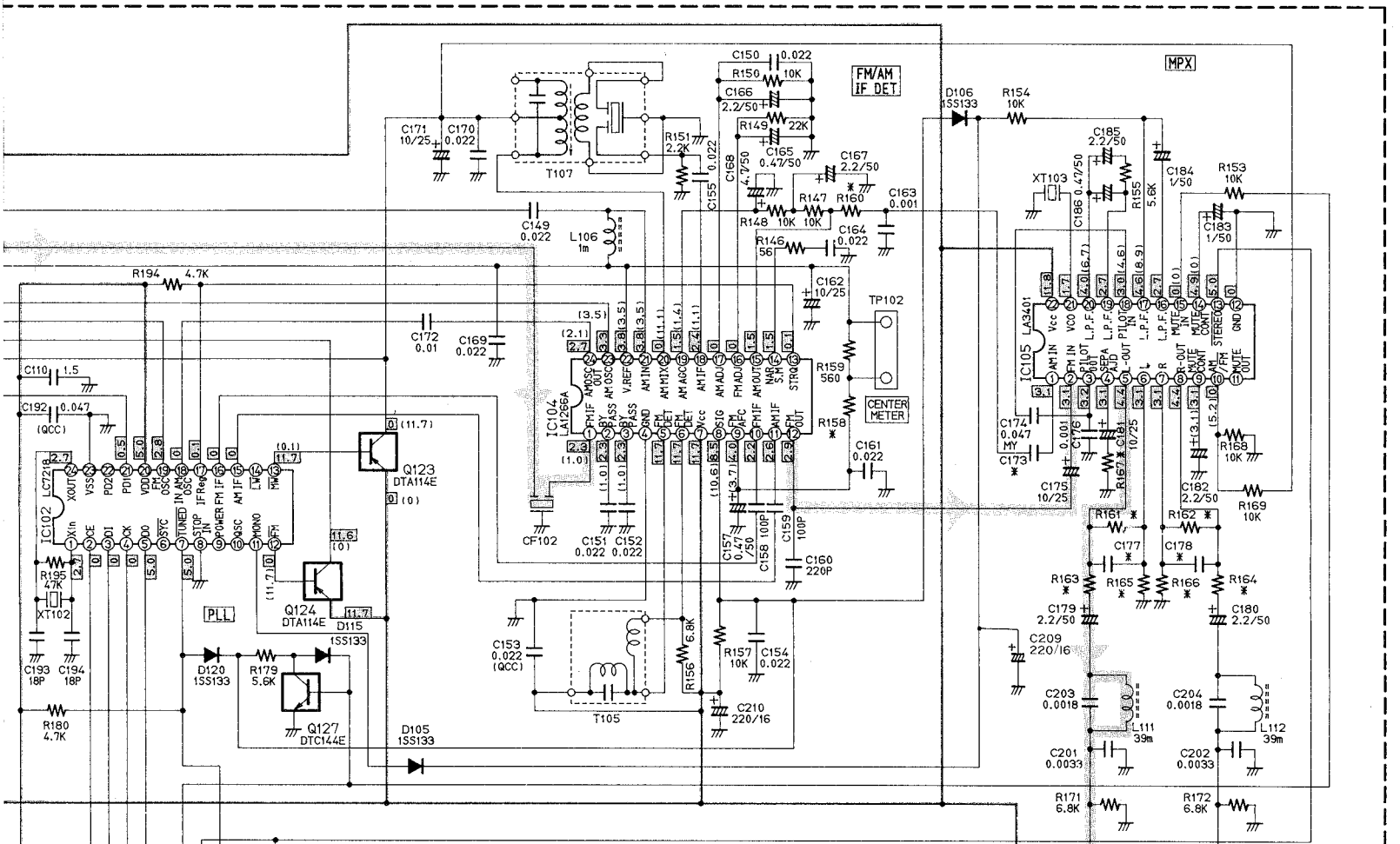

ENN-279-4
APACK
S956
ACro2
S957
D956
D957
KI4
KI1
SO2
SO1
ENN-279-5
REV REC
S951
BCro2
S952
BPACK
S953
FWDREC
S955
D951
D952
D953
D954
D955
FW941
KI3
KI2
KI1
SO2
SO1
Q933
2SA934 (Q.R)
D932
1SR139
D933
1SR139
A REEL DRIVE
IC933
BA6218
B REEL DRIVE
IC934
BA6218
A CAM DRIVE
IC931
BA6218
B CAM DRIVE
IC932
BA6218
ARR
AFR
BRR
BFR
2M
1M
6M
5M
ARC
AFC
BRC
BFC
4M
3M
8M
7M
MOTOR CONTROL
NORMAL SPEED ADJ.
HIGH SPEED ADJ.
VR935 10K
VR934 20K
R935 15K
R936 68K
R934 18K
Q927
2SA933S (R.S)
R930 180K
Q925
DTC114WS
R932 220K
Q928
2SA933S (R.S)
R931 220K
Q926
DTC114WS
R933 220K
R961 10K
R962 10K
R963 10K
R964 10K
R965 10K
R966 10K
Q923
2SD2037 (E.F)
R926 1K
C926
C924 47/10
C925 47/10
D921 MTZ6.2JC
FW934
FW933
FW932
2M
1M
4M
3M
6M
5M
8M
7M
CMB
CMA
ACOM
ACS2
ACS1
ACS0
GND
5V
APLS
BCOM
BCS2
BCS1
BCS0
CAM MOTOR
REEL MOTOR
A MECHA
CAM MOTOR
REEL MOTOR
CAPSTAN MOTOR
B MECHA
IC456
DN6851
RPB
RMS
R.STOP
R.DIR
FPB
FMS
F.STOP
F.DIR
A MECHA
RPB
RMS
R.STOP
R.DIR
B


R961 10K
R962 10K
R963 10K
R964 10K
R965 10K
R966 10K
Q927
2SA933S (R.S)
R930
180K
Q925
DTC114WS
R932
220K
Q928
2SA933S (R.S)
R931
220K
Q926
DTC114WS
R933
220K
MUSIC SCAN AMP
Q923
2SD2037(E.F)
R926
1K
C926
0.01
C924
47/10
C925
47/10
D921
MTZ6.2JC
C923
1/50
R923
100K
R922
1M
R921
10K
C922
0.022
R924
1M
C921
0.022
Q922
2SC1740S (R.S)
Q921
2SC1740S (R.S)
R925
22K
RESET
POF
DCSO
+5.6V
+10V
GND
REC
FADE
BCR
DUB
MSI
OMT
PSW
PBEQ
NRR
BIAS
NR
RMT
HC
LC
FW932
FW931
J925
FW922
FW921
TO-ENC-088
TO-ENJ-049
TO-ENJ-049
ACOM
ACS2
ACS1
ACS0
GND
5V
APLS
BCOM
BCS2
BCS1
BCS0
GND
5V
BPLS
IC456
DN6851
IC455
DN6851
RPB
FPB
RMS
FMS
R.STOP
F.STOP
R.DIR
F.DIR
A MECHA
B MECHA

■ TUNER SECTION

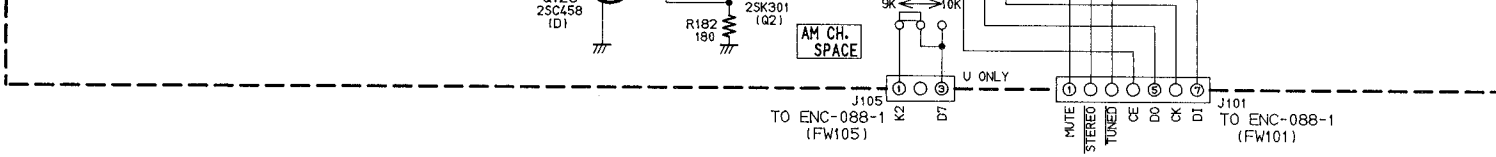
FOR A,U,J,C



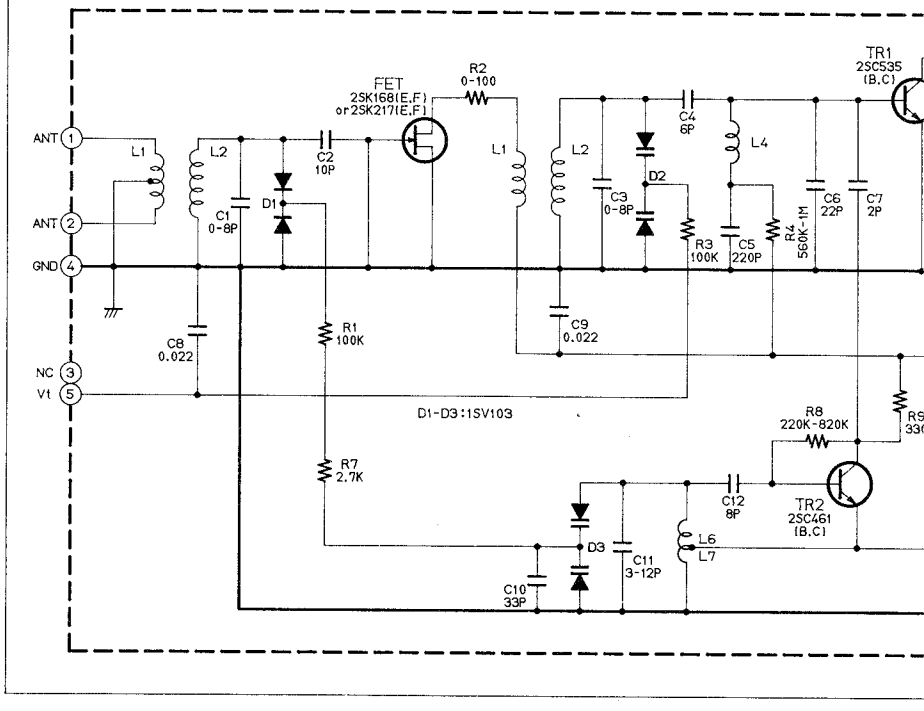


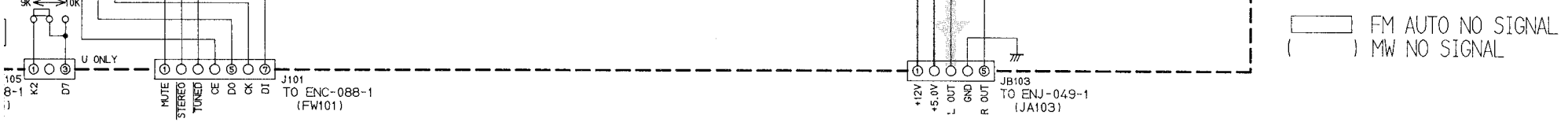
* MARK

	U	A	J,C
R158	27K	27K	18K
R160	5.6K	18K	15K
R161,162	82K	120K	150K
R163,164	4.7K	3.9K	4.7K
R165,166	180K	270K	180K
R167	39K	47K	39K
C173	0.039	0.022	0.022
C177,178	820P	390P	470P

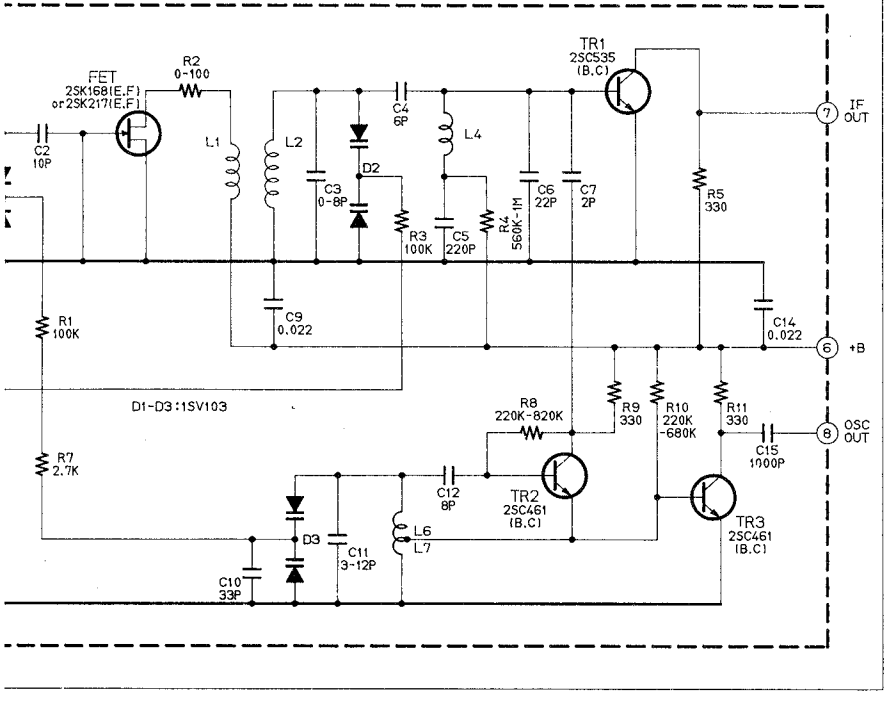


FRONTEND PACK EAF2203-001



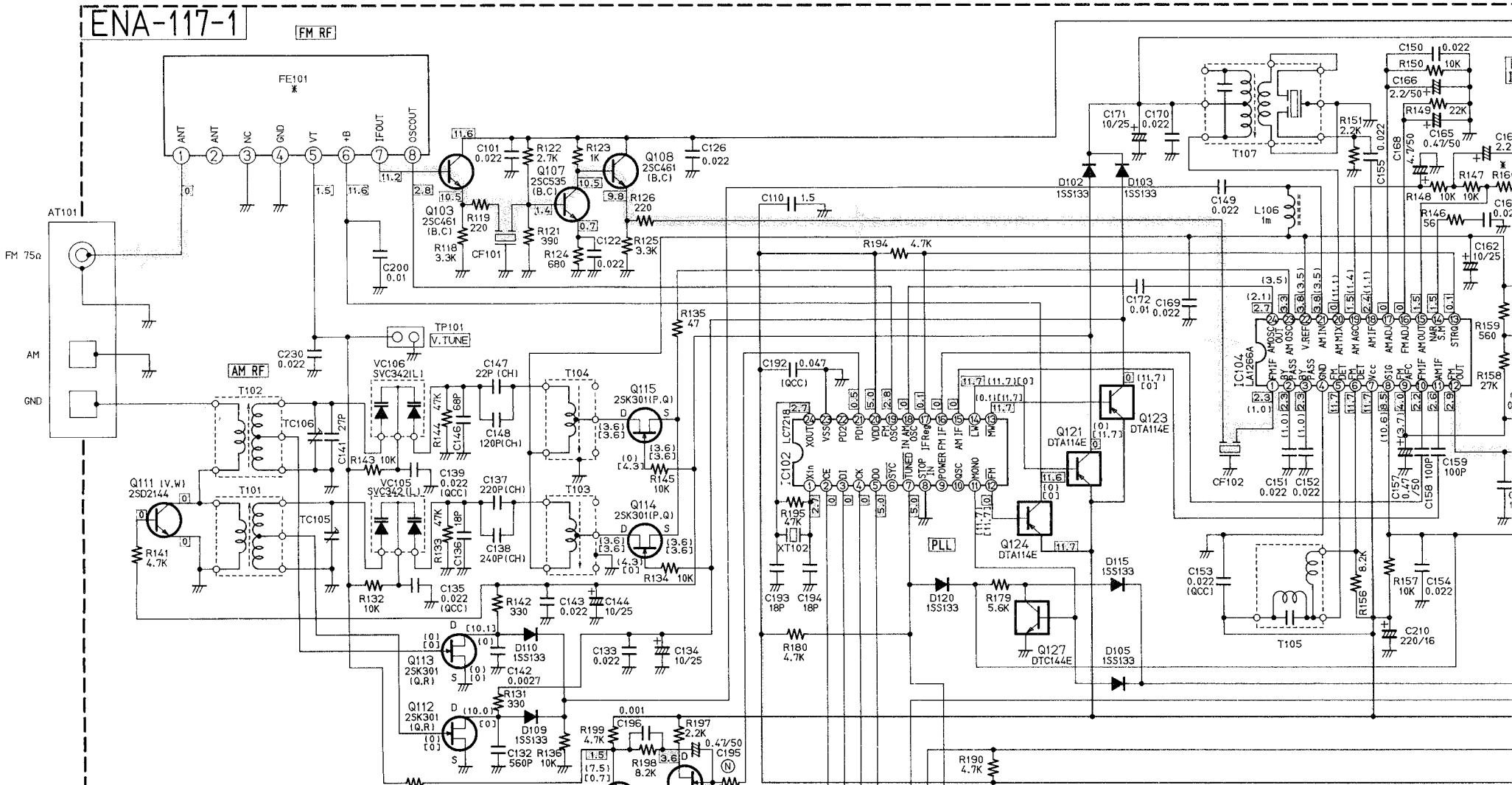


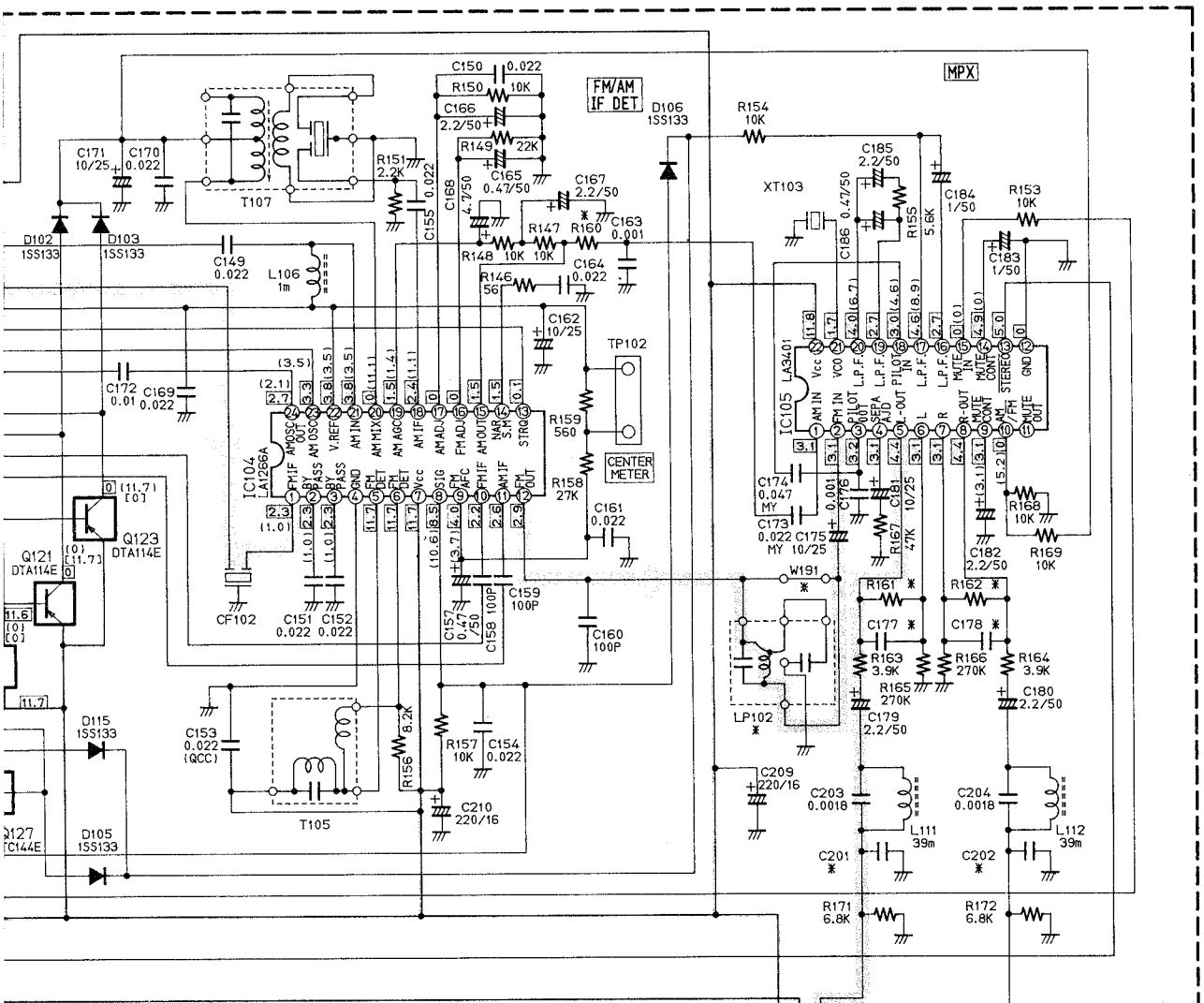
PACK EAF2203-001



■ TUNER SECTION

FOR BS,G,GI,E,EF,V,VX

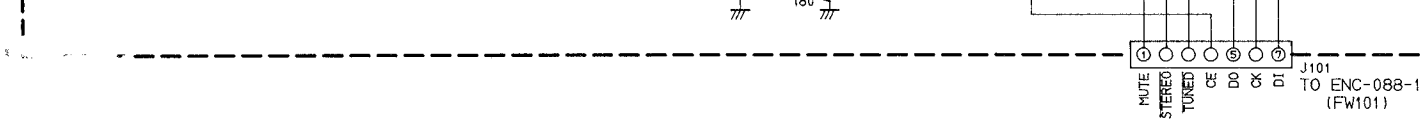




✳ MARK

	LBS	LG,LGI,LE,LEF,LV	VX
R160	8.2K	18K	18K
R161,162	82K	120K	120K
C177,178	560P	470P	470P
C201,202	0.0033	0.001	0.001
FE101	EAF2203-003	EAF2203-003	EAF2301-001
W191	NONE	NONE	USED
LP102	USED	USED	NONE

▭ FM AUTO NO SIGNAL
( ) MW NO SIGNAL
[ ] LW NO SIGNAL



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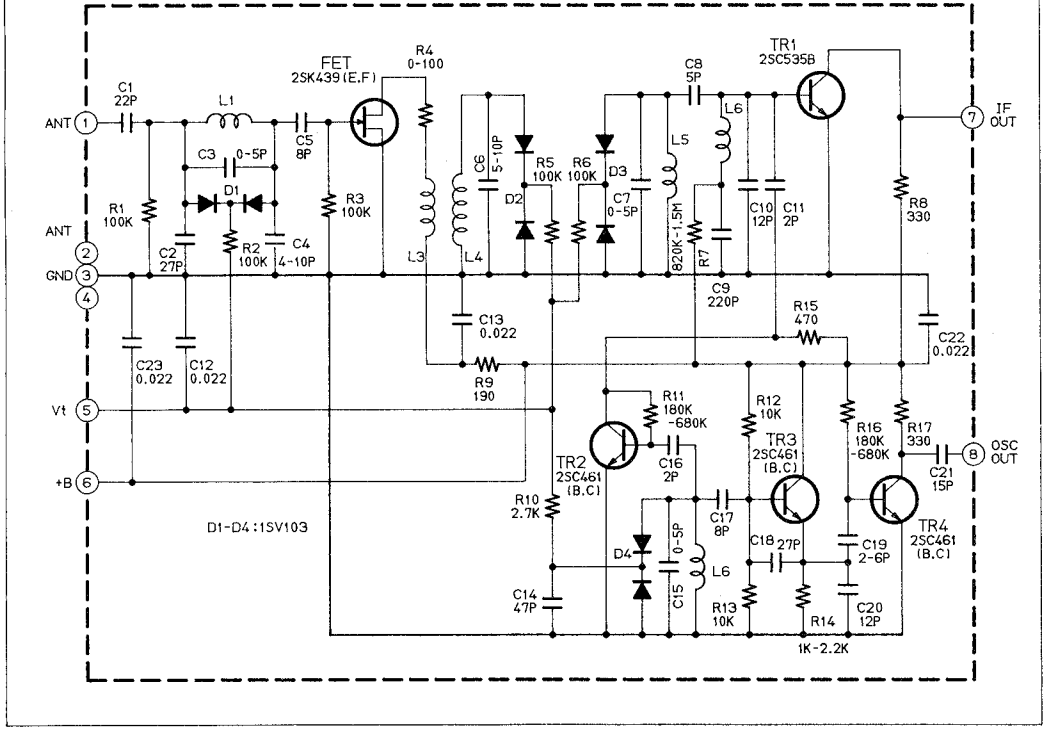
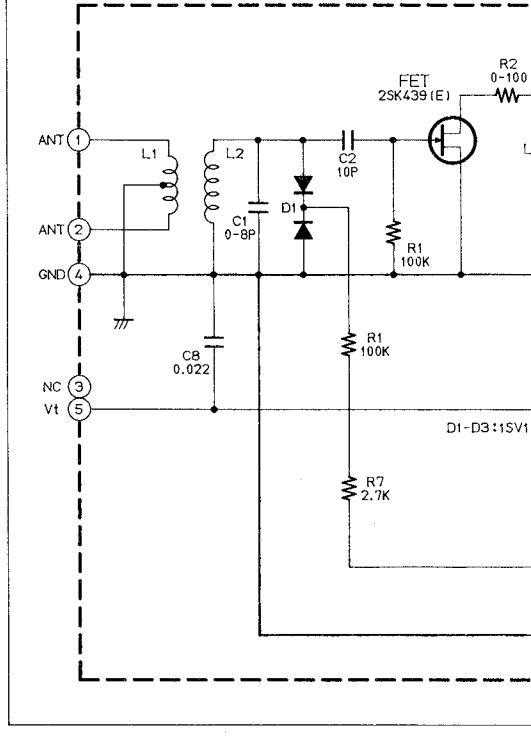


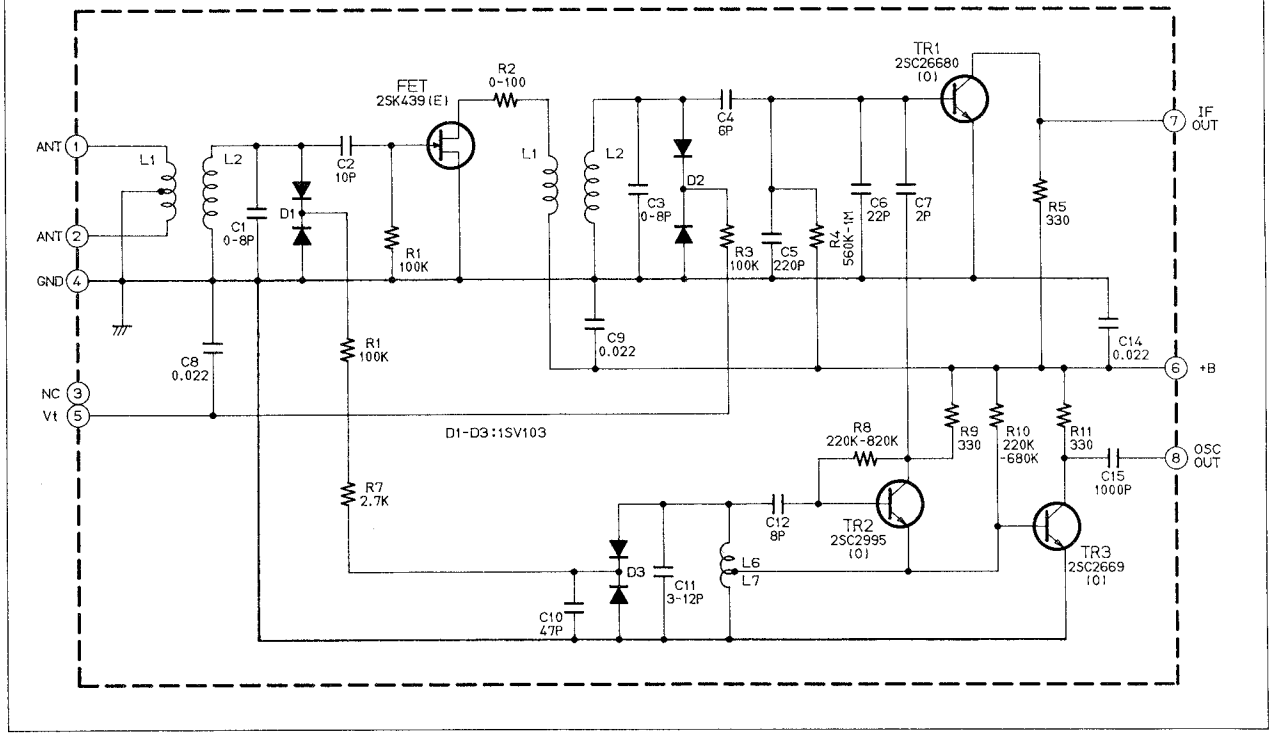
FRONTEND PACK EA



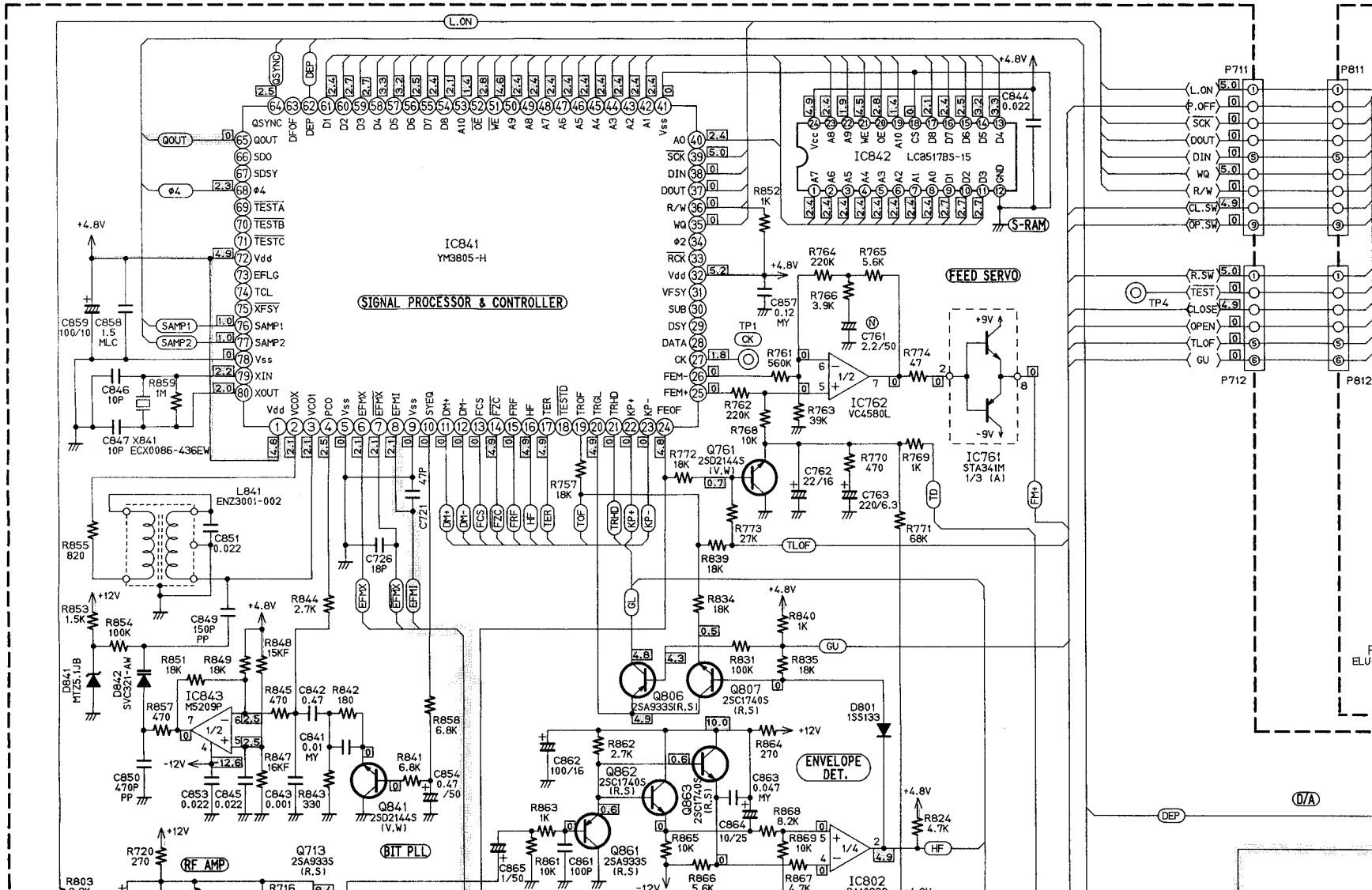
ENC-088-1
(FW101)

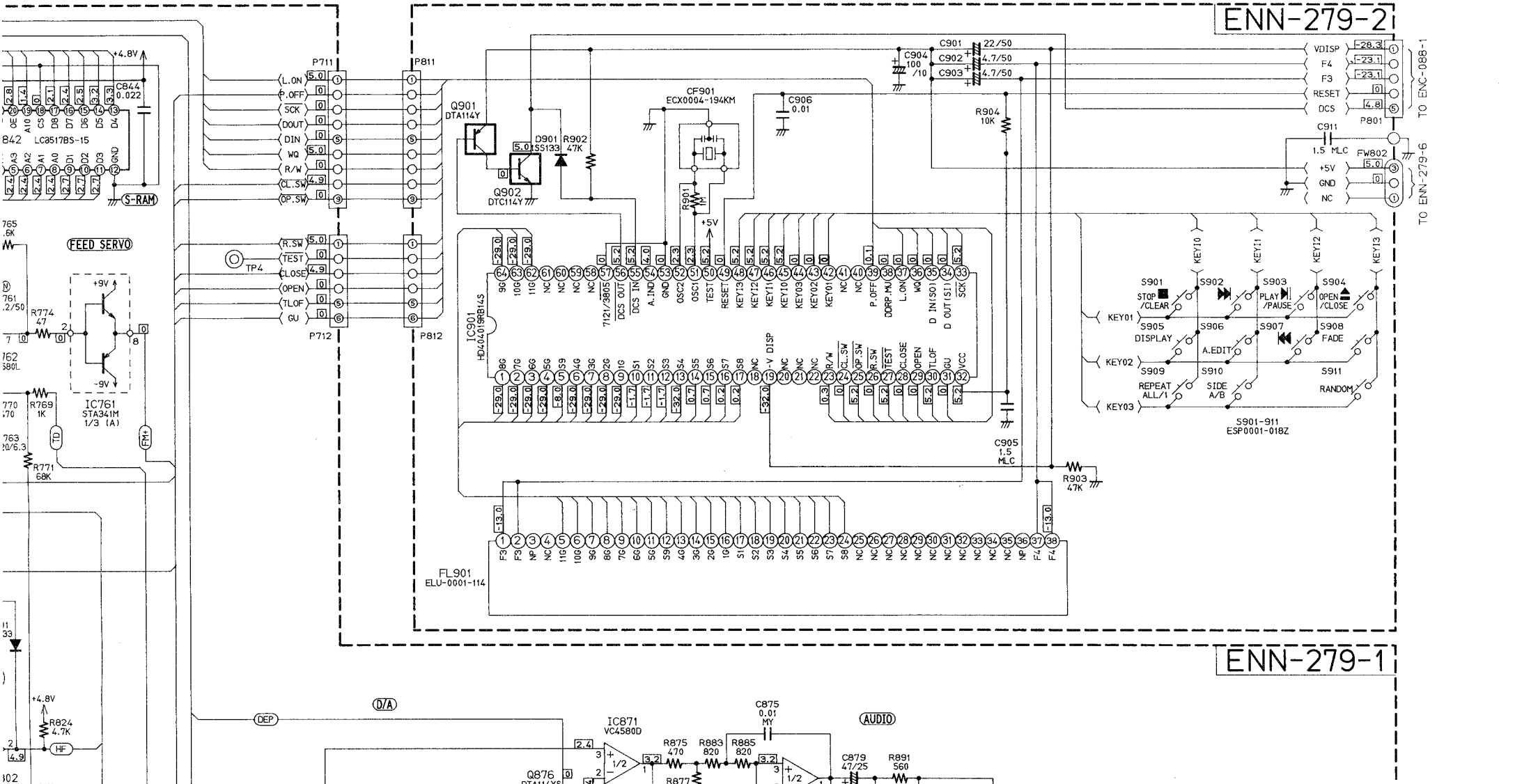
JB103
TO ENJ-049-1
(JA103)

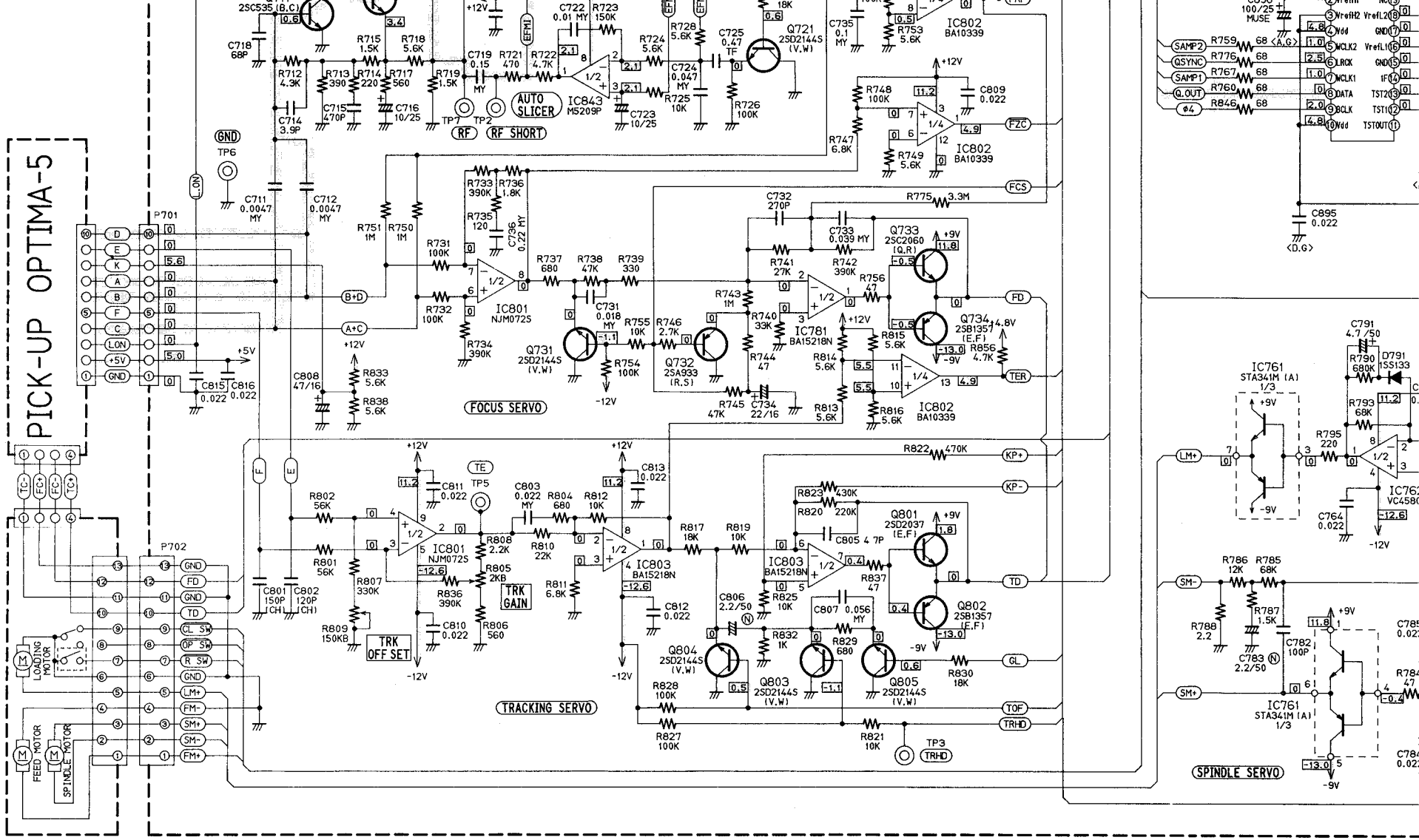
FRONTEND PACK EAF2301-001

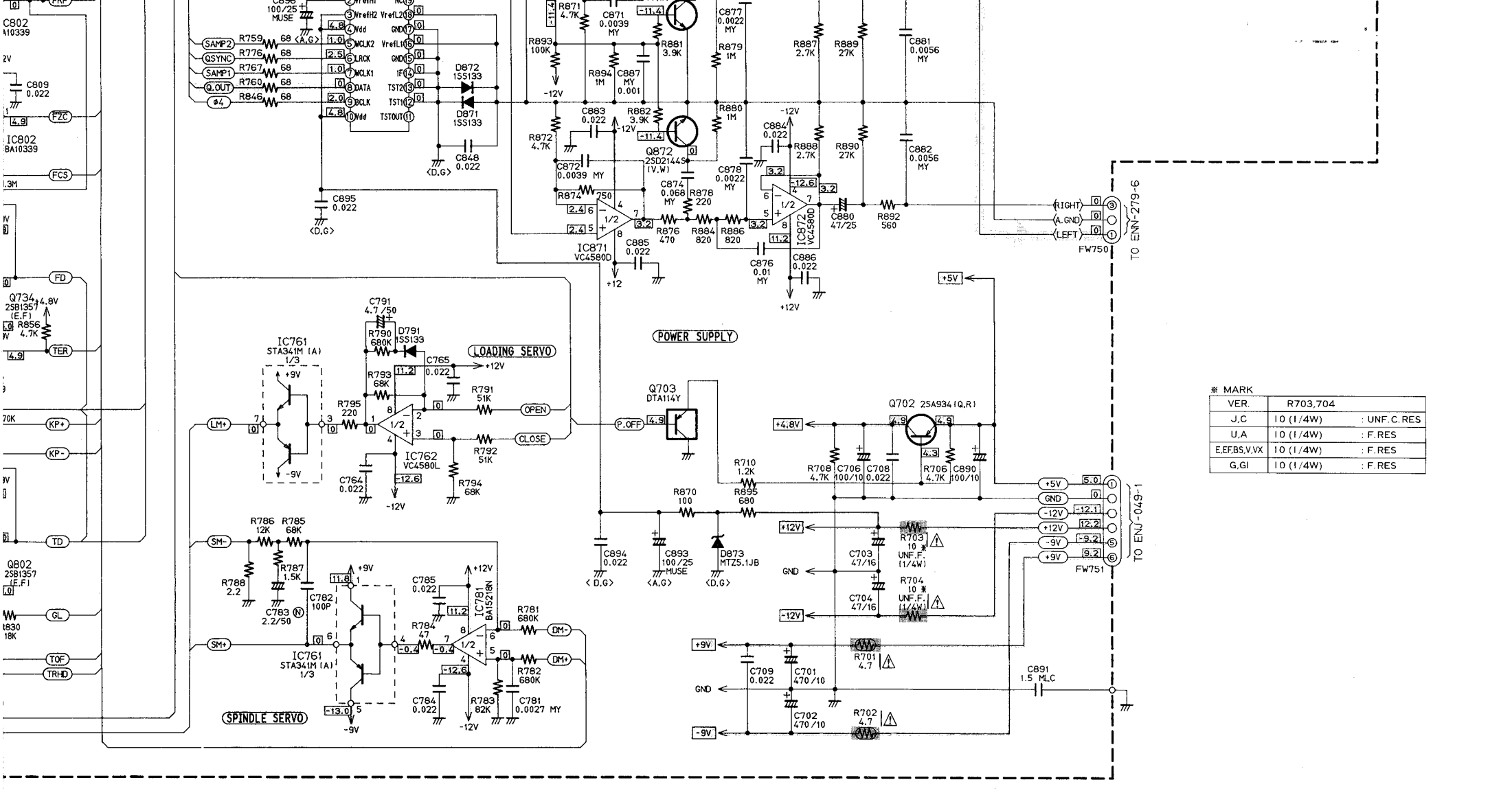


■ CD SECTION


IC841
YM3805-H
SIGNAL PROCESSOR & CONTROLLER
IC842 LC8517BS-15
S-RAM
IC843 M5209P
IC762 VC4580L
IC761 STA341M 1/3 (A)
IC802
Q761 2SD2144S (V,W)
Q806 2SA933S(R,S)
Q807 2SC1740S (R,S)
Q862 2SC1740S (R,S)
Q863 2SC1740S (R,S)
Q841 2SD2144S (V,W)
Q861 2SA933S (R,S)
Q713 2SA933S (R,S)
L841 ENZ3001-002
X841 ECX0086-436EW
D841 MTZ5.1JB
D842 SVC321-AW
D801 1SS133
FEED SERVO
ENVELOPE DET.
BIT PLL
RF AMP
D/A
P711
P712
P811
P812
TP1
TP4
L.ON
QSYNC
DEP
QOUT
SDO
SDSY
φ4
TESTA
TESTB
TESTC
EFLG
TCL
XFSY
SAMP1
SAMP2
XIN
XOUT
SCK
DIN
DOUT
R/W
WQ
RCK
VFSY
SUB
DSY
DATA
CK
FEM-
FEM+
FEOF
TOFF
TRKD
KP+
KP-
TLOF
TD
GU
GL
HF
DEP
S.SW
TEST
CLOSE
OPEN
TLOF
GU
P.OFF
CL.SW
OP.SW

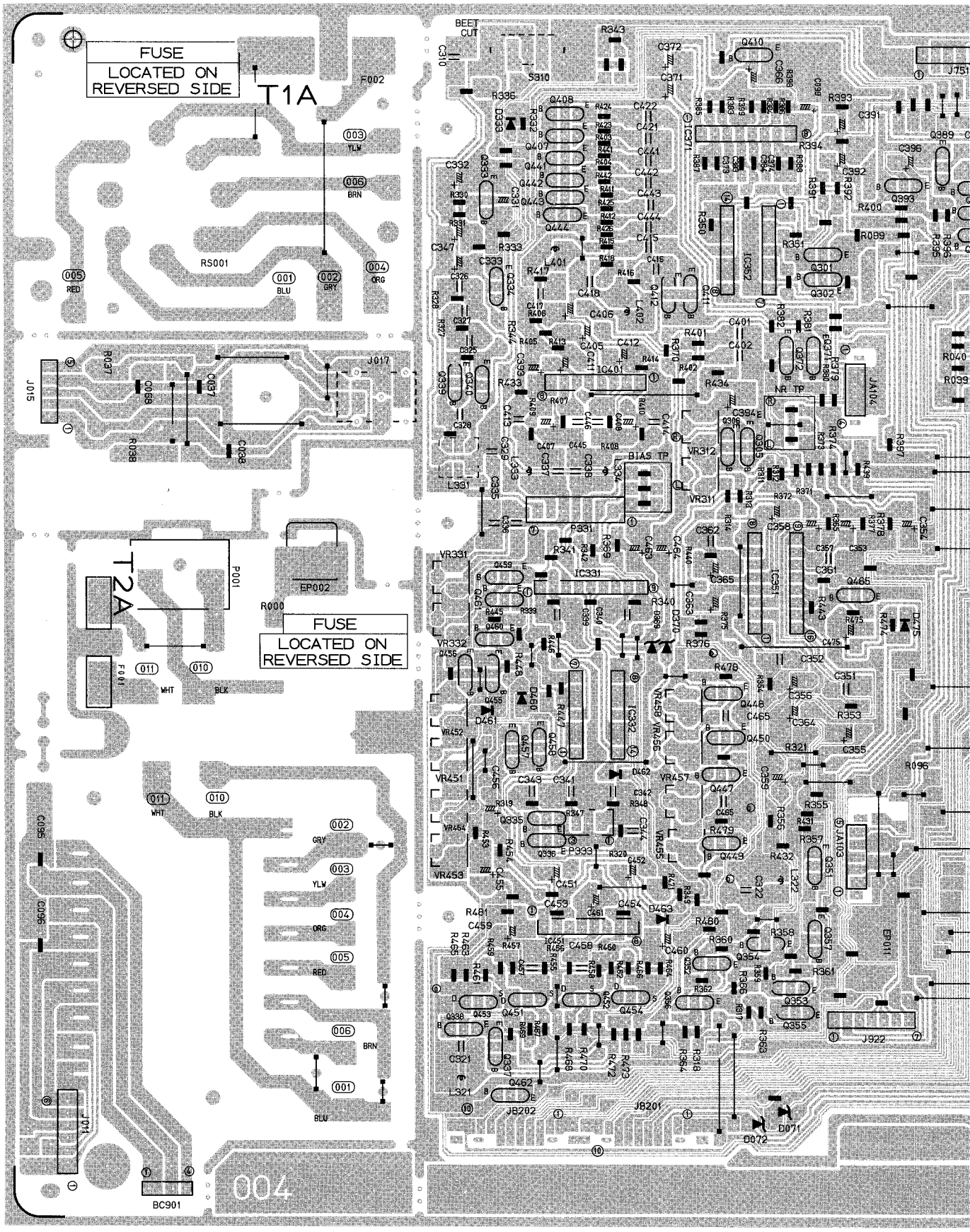

ENN-279-2
ENN-279-1
P711
P811
P712
P812
P801
FW802
TO ENC-088-1
TO ENN-279-6
Q901
DTA114Y
Q902
DTC114Y
D901
1SS133
R902
47K
CF901
ECX0004-194KM
C906
0.01
C901
22/50
C902
4.7/50
C903
4.7/50
C904
100
/10
R904
10K
C911
1.5 MLC
R901
1M
+5V
C905
1.5
MLC
R903
47K
IC901
HD404019RB14S
FL901
ELU-0001-114
S-RAM
LC3517BS-15
C844
0.022
FEED SERVO
TP4
IC761
STA341M
1/3 (A)
R774
47
R769
1K
R771
68K
+9V
-9V
S901
S902
S903
S904
S905
S906
S907
S908
S909
S910
S911
KEY01
KEY02
KEY03
KEY10
KEY11
KEY12
KEY13
STOP
/CLEAR
PLAY
/PAUSE
OPEN
/CLOSE
DISPLAY
A.EDIT
FADE
REPEAT
ALL/1
SIDE
A/B
RANDOM
S901-911
ESP0001-018Z
D/A
AUDIO
IC871
VC4580D
C875
0.01
MY
R875
470
R883
820
R885
820
C879
47/25
R891
560
Q876
R824
4.7K
DEP
HF
TD
FM+

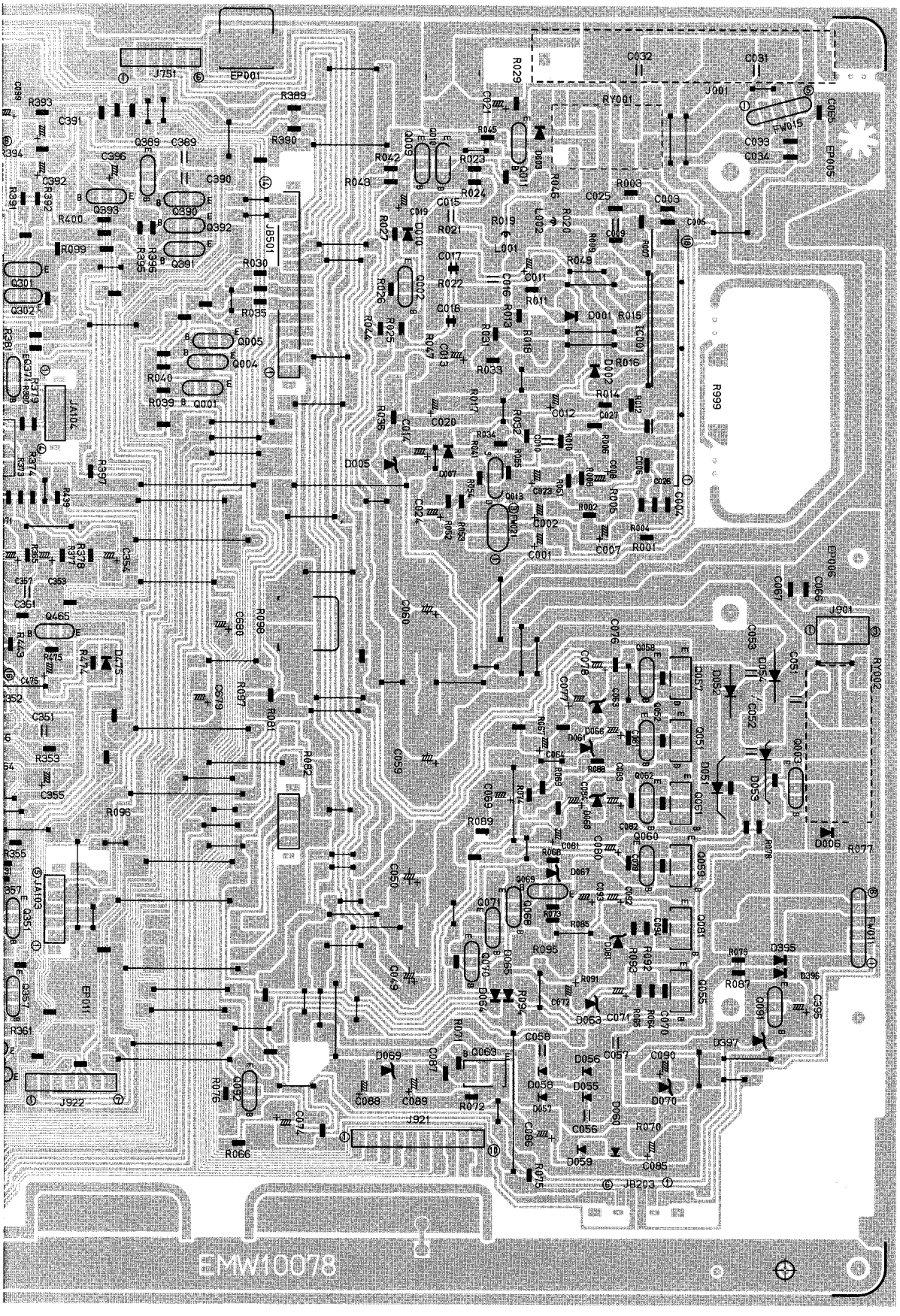

PICK-UP OPTIMA-5
P701
P702
FOCUS SERVO
TRACKING SERVO
SPINDLE SERVO
IC801 NJM072S
IC803 BA15218N
IC781 BA15218N
IC802 BA10339
IC843 M5209P
IC761 STA341M (A) 1/3
Q731 2SD2144S (V,W)
Q732 2SA933 (R,S)
Q733 2SC2060 (Q,R)
Q734 2SB1357 (E,F)
Q801 2SD2037 (E,F)
Q802 2SB1357 (E,F)
Q803 2SD2144S (V,W)
Q804 2SD2144S (V,W)
Q805 2SD2144S (V,W)
Q721 2SD2144S (V,W)
AUTO SLICER
TRK OFF SET
TRK GAIN
LOADING MOTOR
FEED MOTOR
SPINDLE MOTOR
FCS
FZC
FD
TD
TER
GL
TOF
TRHD
KP+
KP-
TE
RF
RF SHORT
GND
+12V
+9V
+5V
-12V
-9V


POWER SUPPLY
LOADING SERVO
SPINDLE SERVO
IC761 STA341M (A) 1/3
IC762 VC4580L
IC781 BA15218N
IC871 VC4580D
IC872 VC4580D
Q703 DTA114Y
Q702 2SA934(Q,R)
Q872 2SD2144S (V,W)
D872 1SS133
D871 1SS133
D791 1SS133
D873 MTZ5.1JB
FW750
FW751
TO ENN-279-6
TO ENJ-049-1
※ MARK
VER. R703,704
J,C 10 (1/4W) : UNF.C.RES
U,A 10 (1/4W) : F.RES
E,EF,BS,V,VX 10 (1/4W) : F.RES
G,GI 10 (1/4W) : F.RES

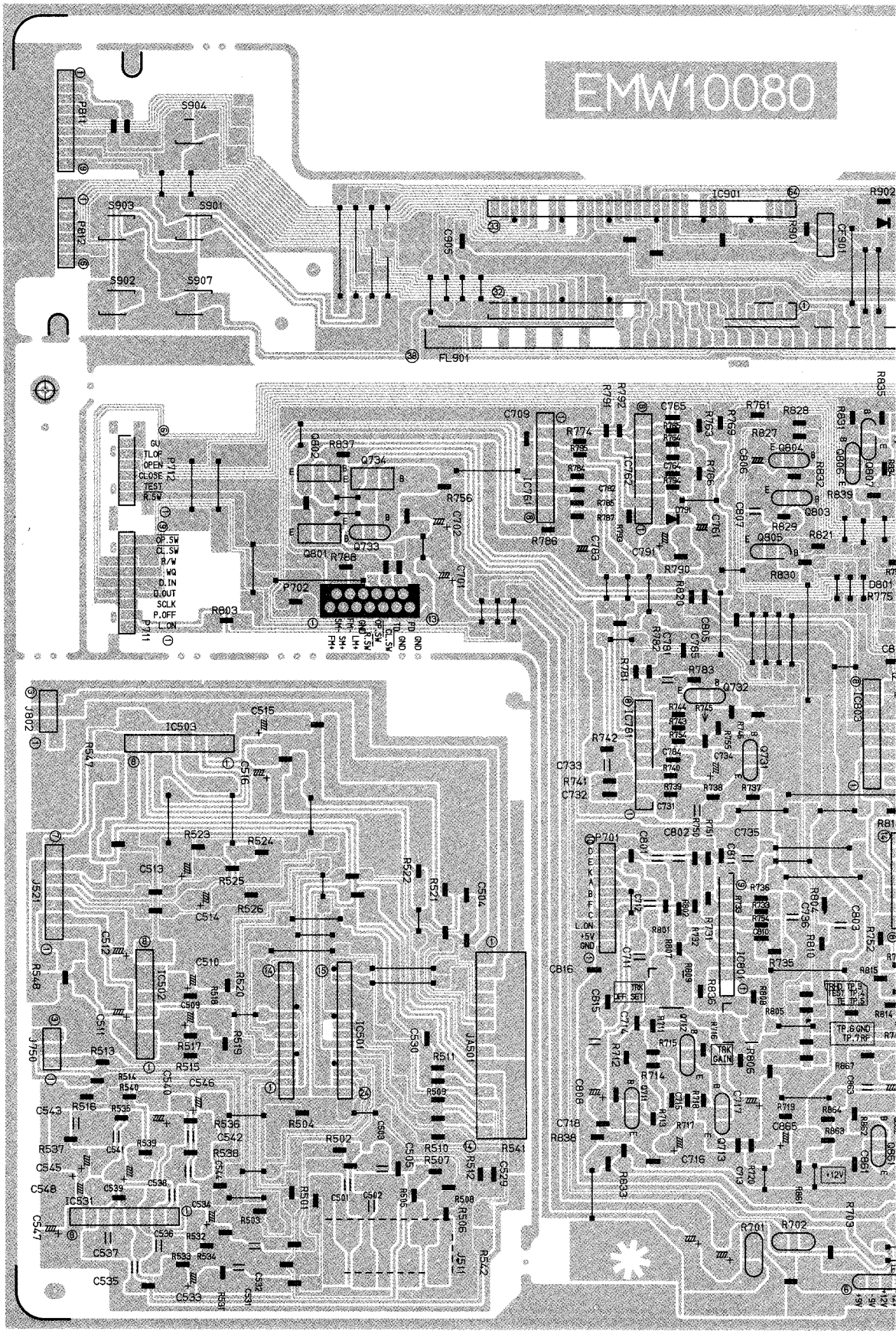
Printed Circuit Boards

■ Cassette and Amp PCB (ENJ-049)

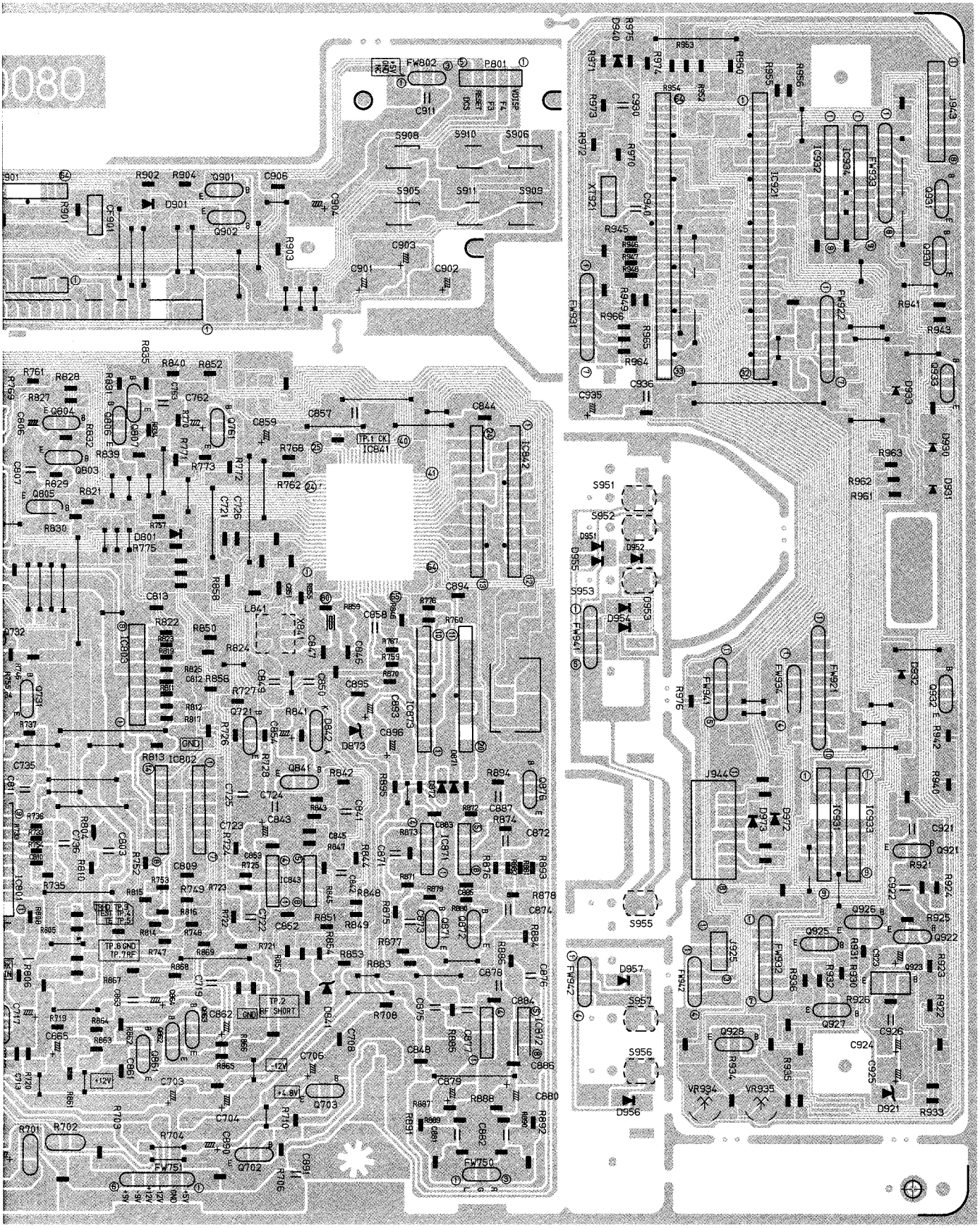



EMW10078

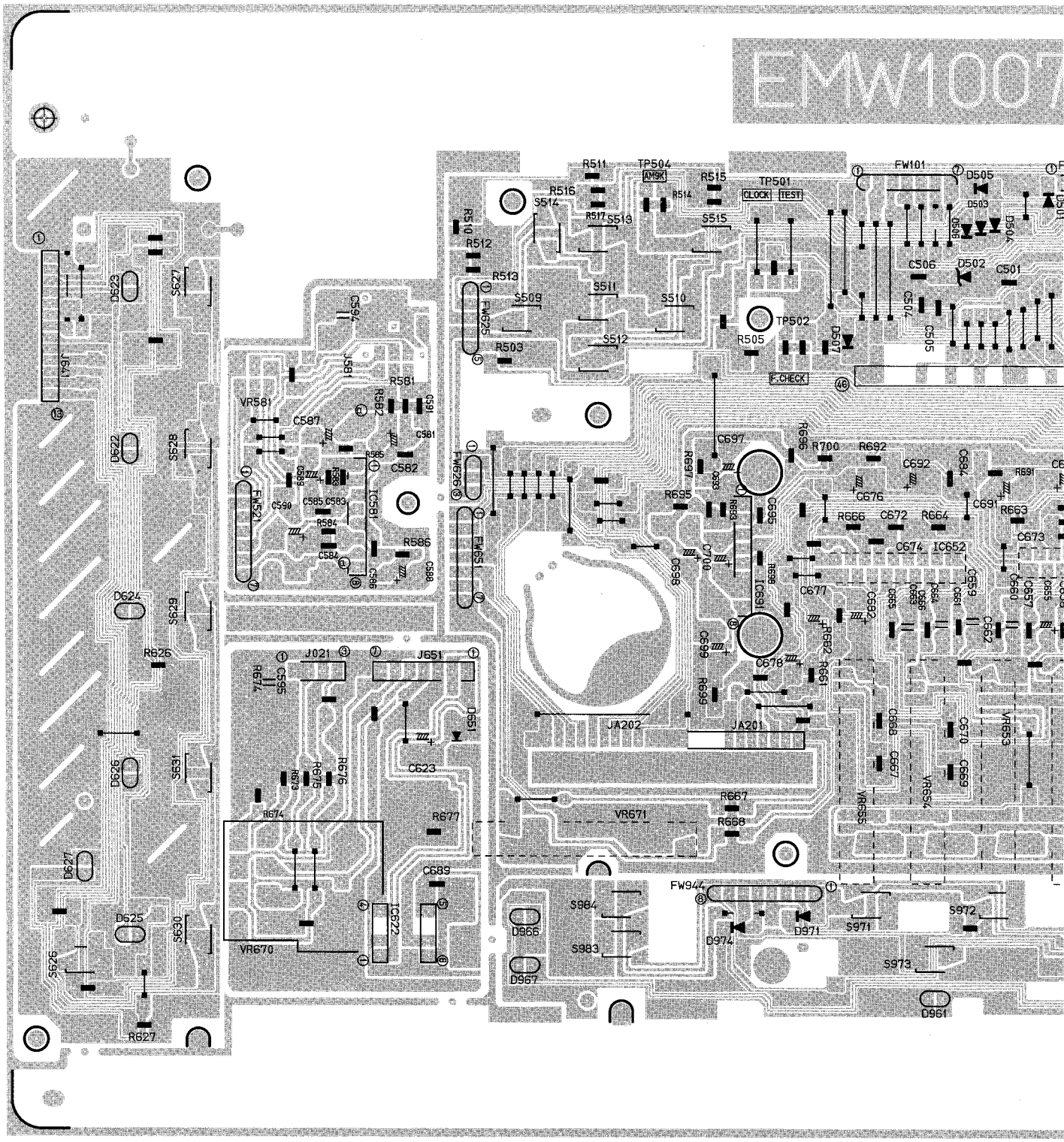
■ CD and Cassette Mecha Control PCB (ENN-279)

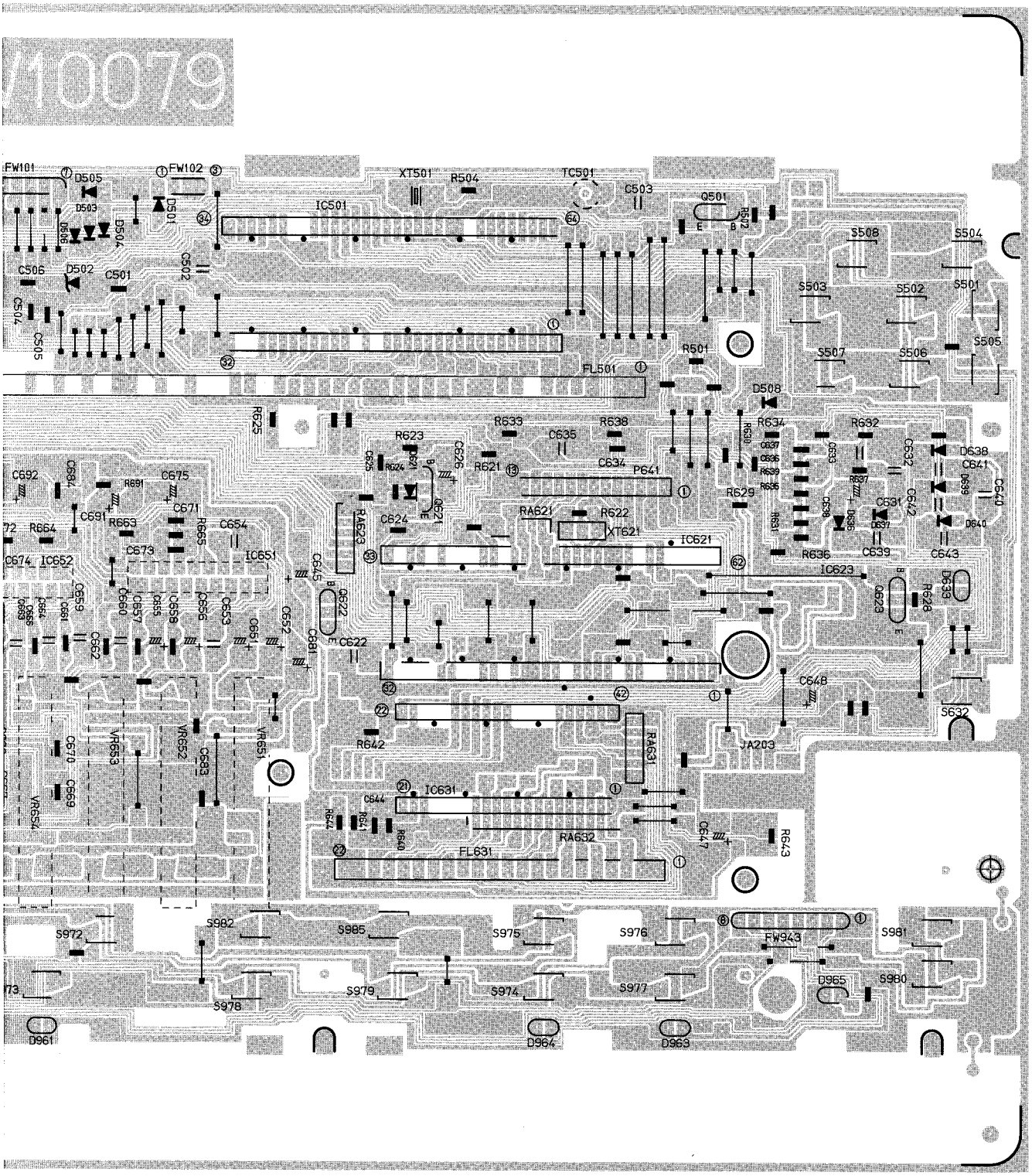


30BK CA-MX30BK

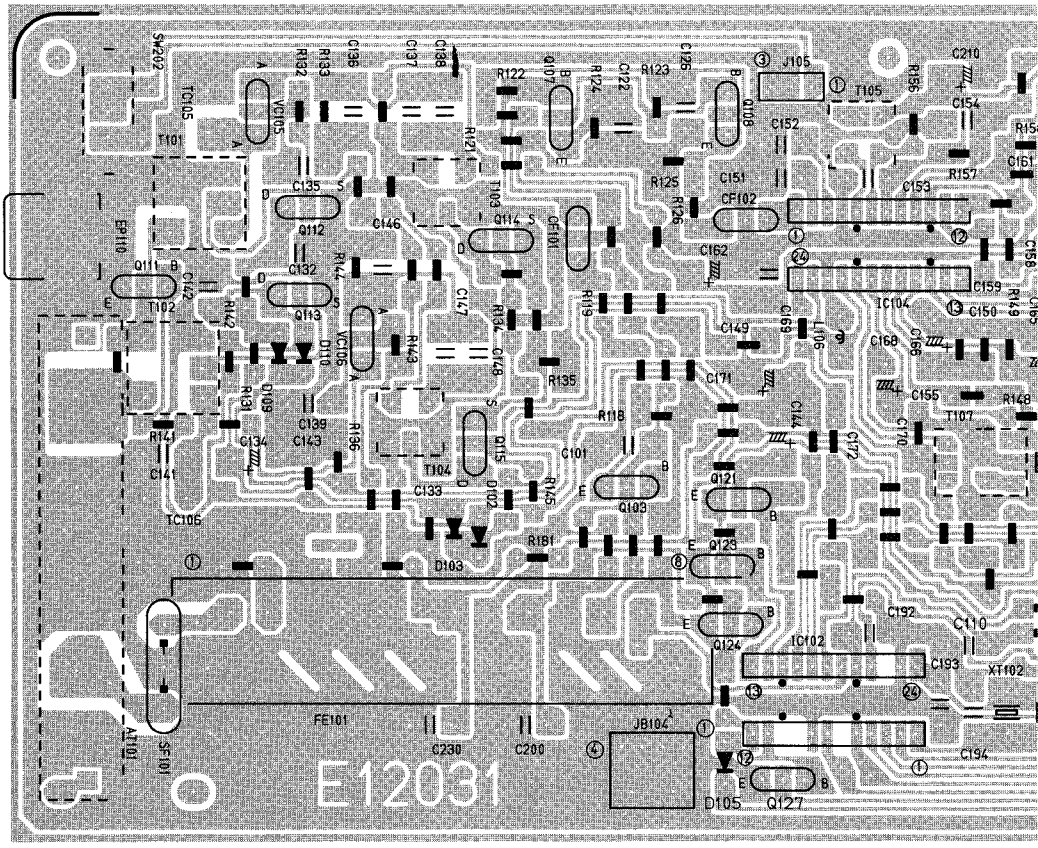


■ System Control and Sourse SW PCB (ENC-088)

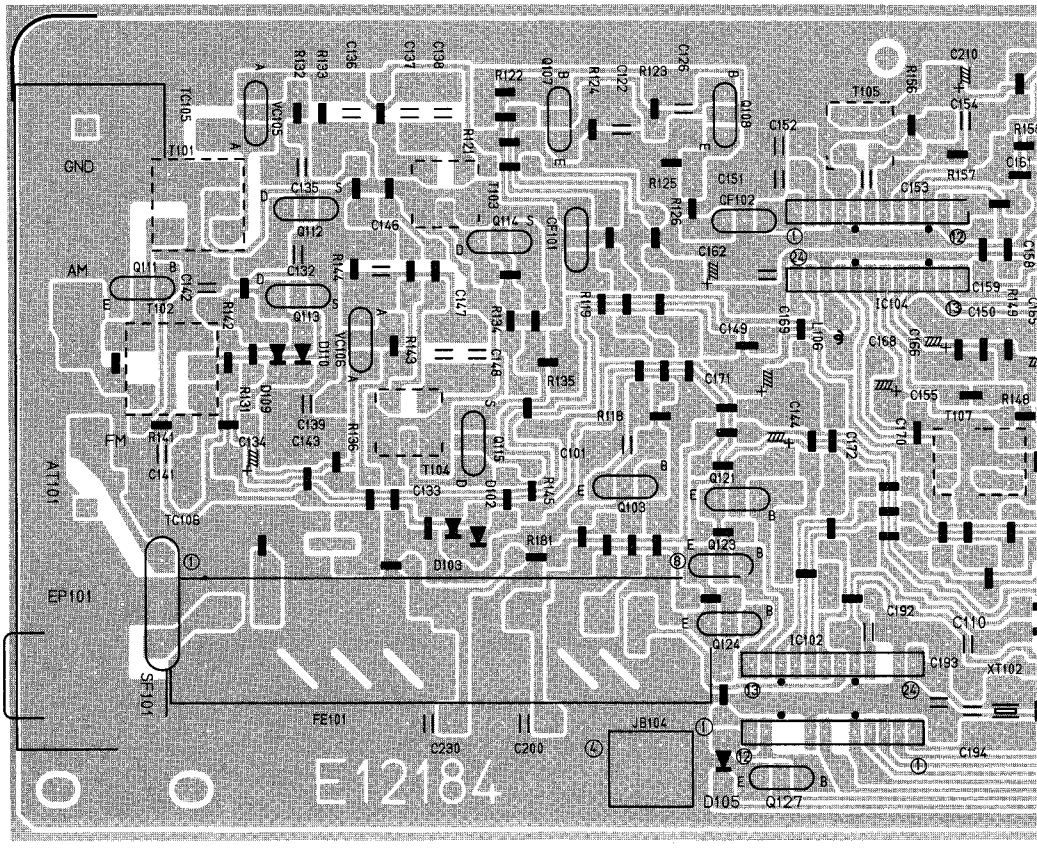


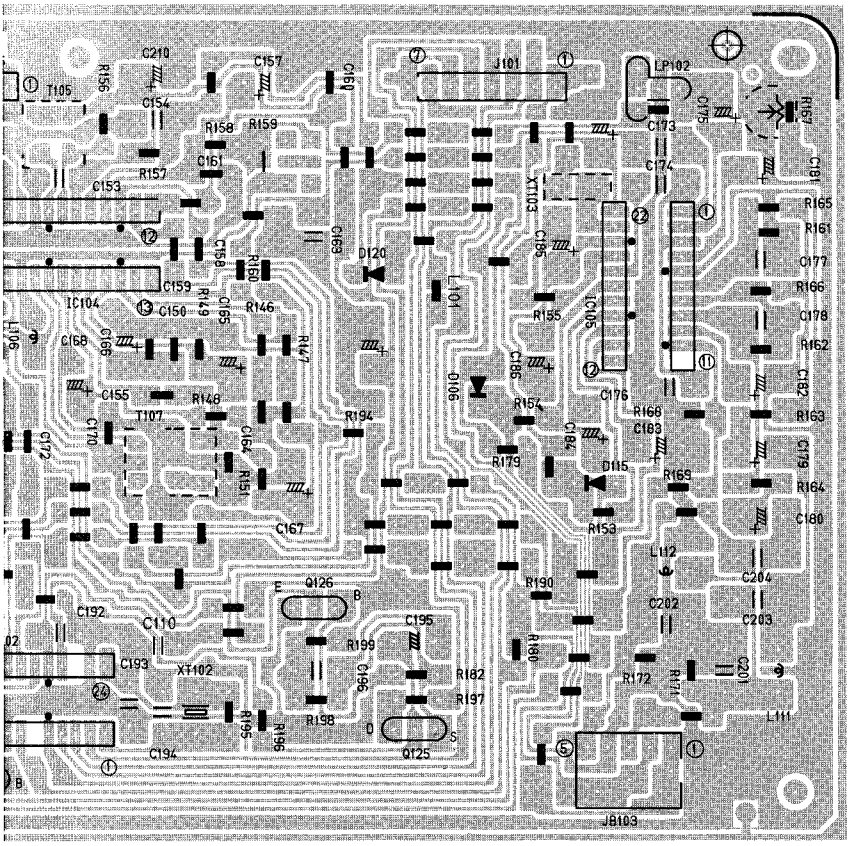

/10079
FW101
D505
FW102
XT501
R504
TC501
C503
Q501
IC501
S508
S504
S503
S502
S501
S507
S506
S505
C506
D502
C501
C502
C504
C505
R501
FL501
D508
R625
R623
R633
C635
R638
R634
R632
C632
D638
C641
C640
C692
C694
C675
C691
C671
R663
C654
C673
IC652
IC651
C645
C622
C624
RA621
R622
XT621
IC621
R629
R636
IC623
D639
C643
C648
JA203
S632
R642
RA631
IC631
RA632
FL631
VR653
VR652
VR651
C670
C669
C683
VR654
S982
S985
S975
S976
FW943
S981
S972
S979
S974
S977
D965
S980
S978
D961
D964
D963

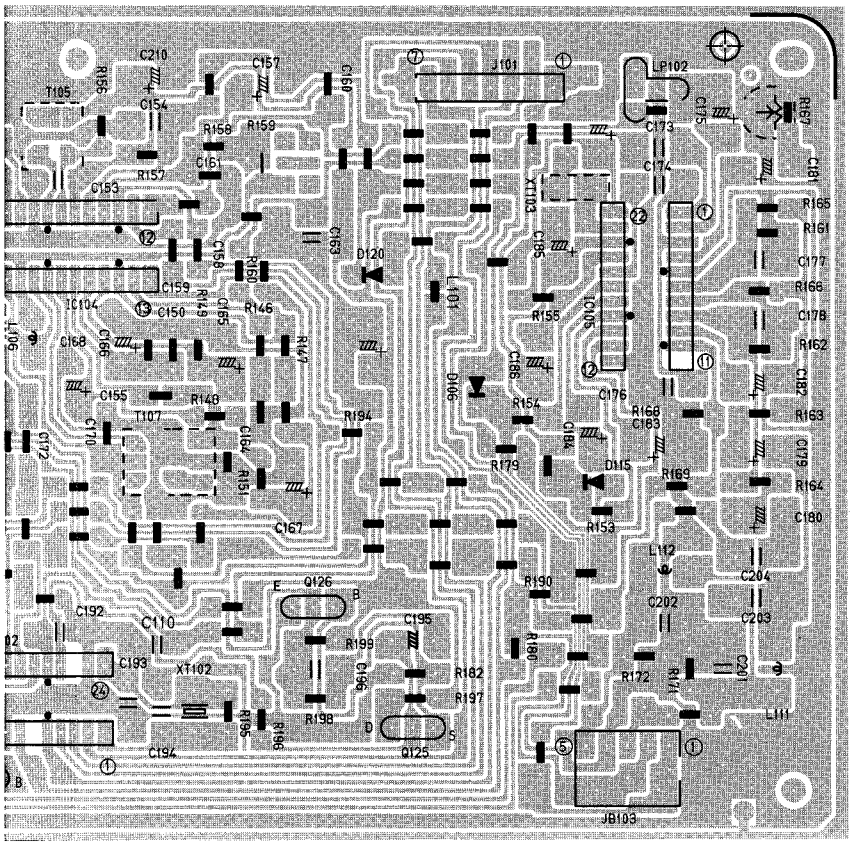
■TUNER PCB (ENA-116) ····· FOR A, U, J, C



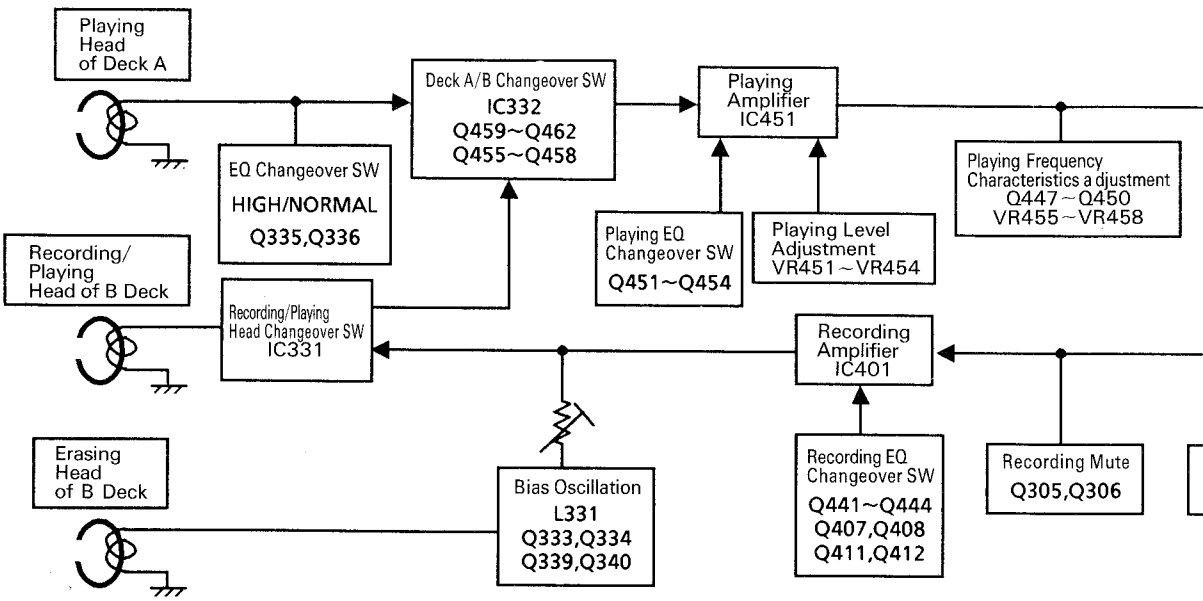
■TUNER PCB (ENA-117) ····· FOR BS, G, GI, E, EF, V, VX

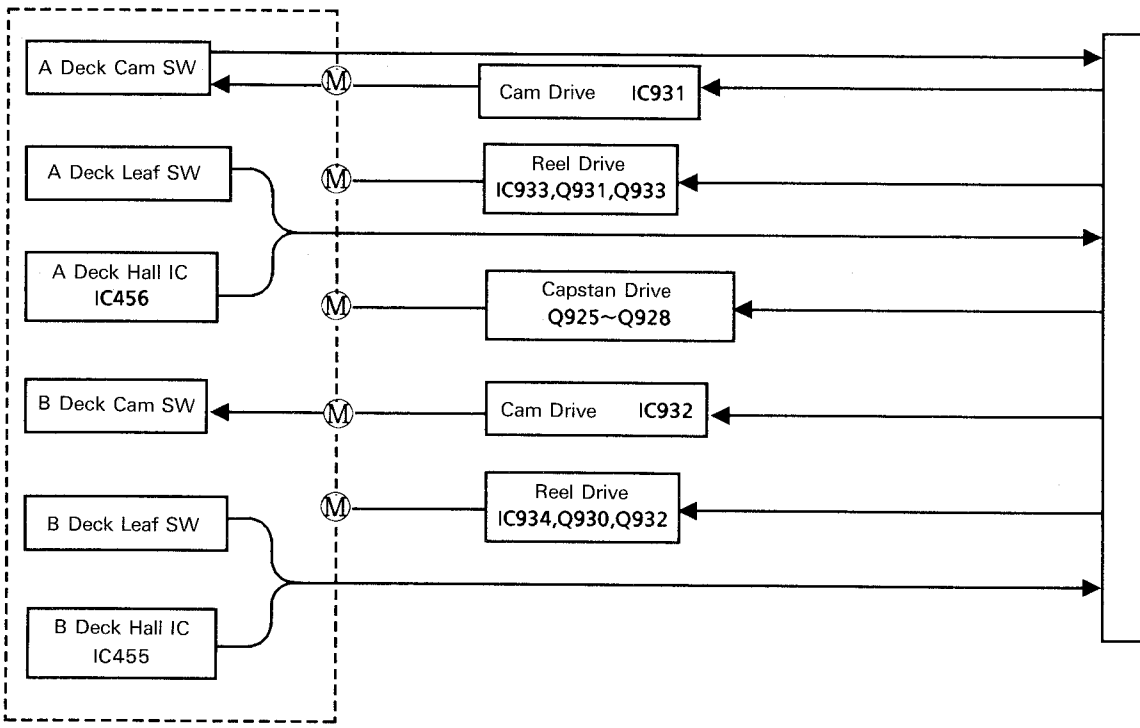


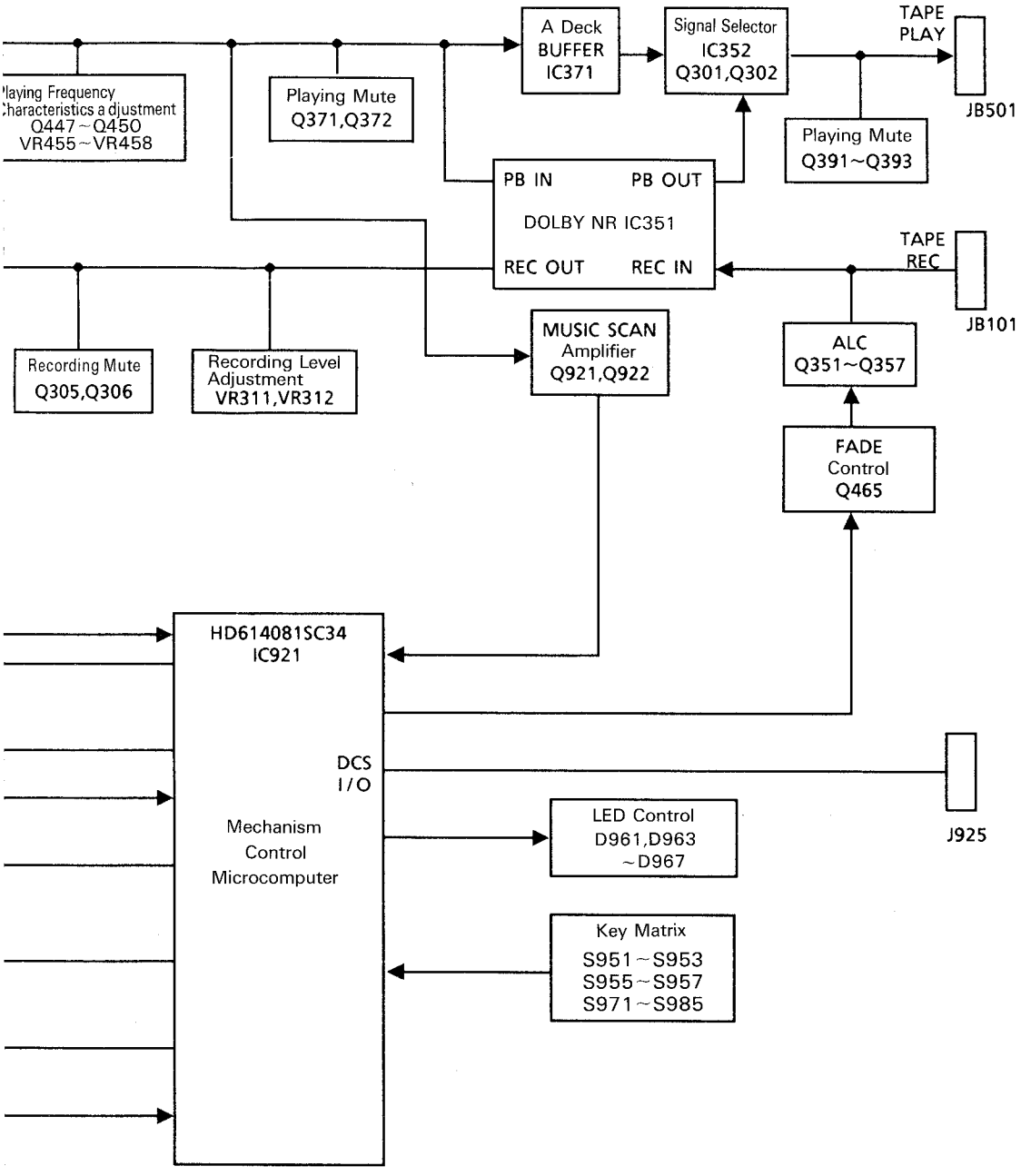

C210
C157
C161
J101
LP102
T105
C154
R156
R158
R159
C173
C175
R167
C153
R157
C161
C174
C181
XT103
R165
C163
D120
C158
C195
R161
C159
R160
L101
C177
IC104
C150
R149
C185
R146
R155
IC105
R166
C178
L106
C168
C166
R147
R162
C186
C182
C155
R148
C176
R168
C183
R163
T107
C170
R194
C164
C184
C179
C172
R151
R179
D115
R169
R164
C167
R153
C180
L112
C204
R190
Q126
C202
C192
C110
C195
C203
R199
R180
C193
XT102
C196
R182
C201
R172
R171
R197
L111
R195
R198
D
S
Q125
C194
JB103


C210
C157
C161
J101
LP102
T105
C154
R156
R158
R159
C173
C175
R167
C153
R157
C161
C174
C181
XT103
R165
C163
D120
C158
C195
R161
C159
R160
L101
C177
IC104
C150
R149
C185
R146
R155
IC105
R166
C178
L106
C168
C166
R147
R162
C186
C182
C155
R148
C176
R168
C183
R163
T107
C170
R194
C164
C184
C179
C172
R151
R179
D115
R169
R164
C167
R153
C180
L112
C204
R190
Q126
C202
C192
C110
C195
C203
R199
R180
C193
XT102
C196
R182
C201
R172
R171
R197
L111
R195
R198
D
S
Q125
C194
JB103

■ Cassette Deck Section

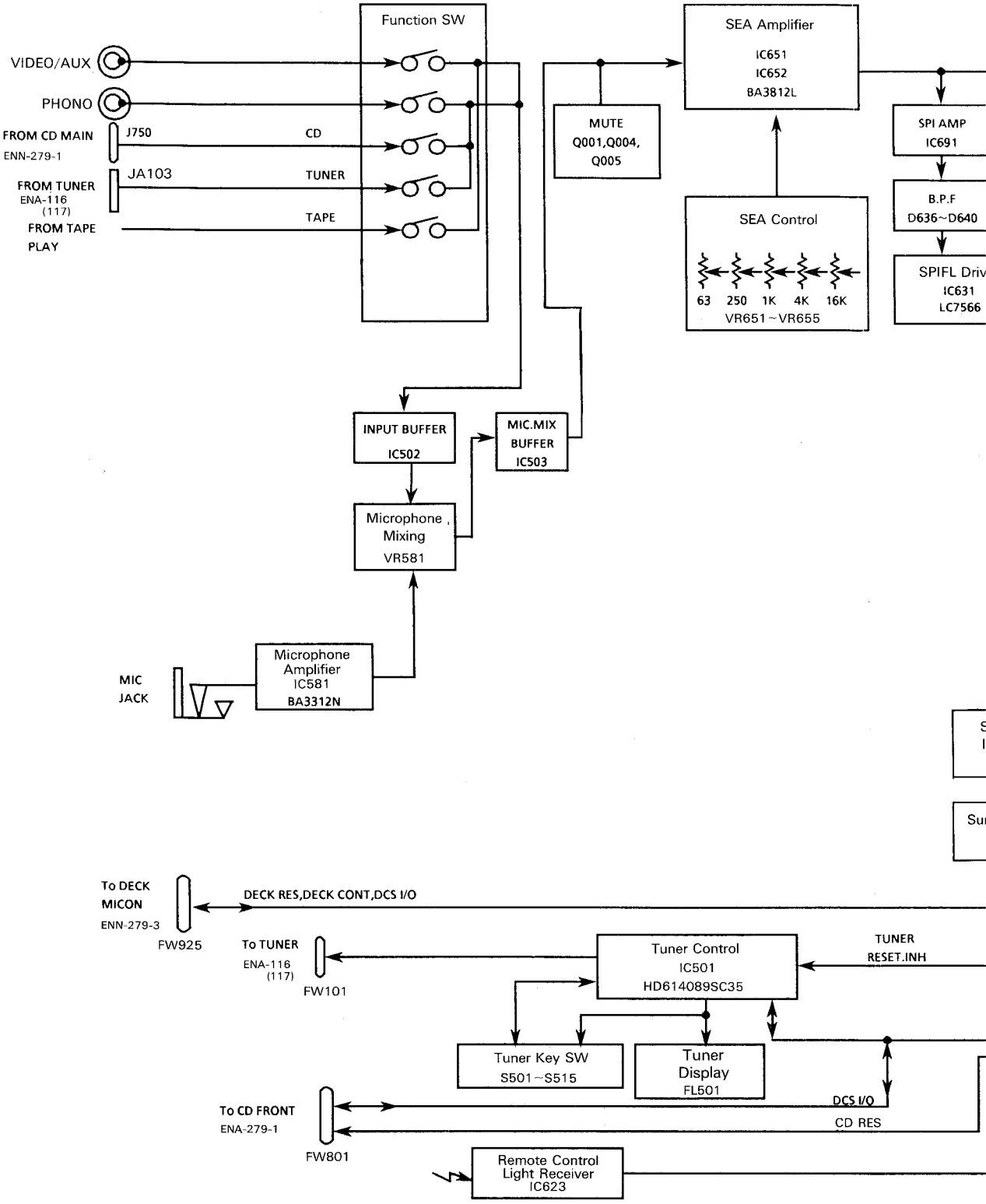


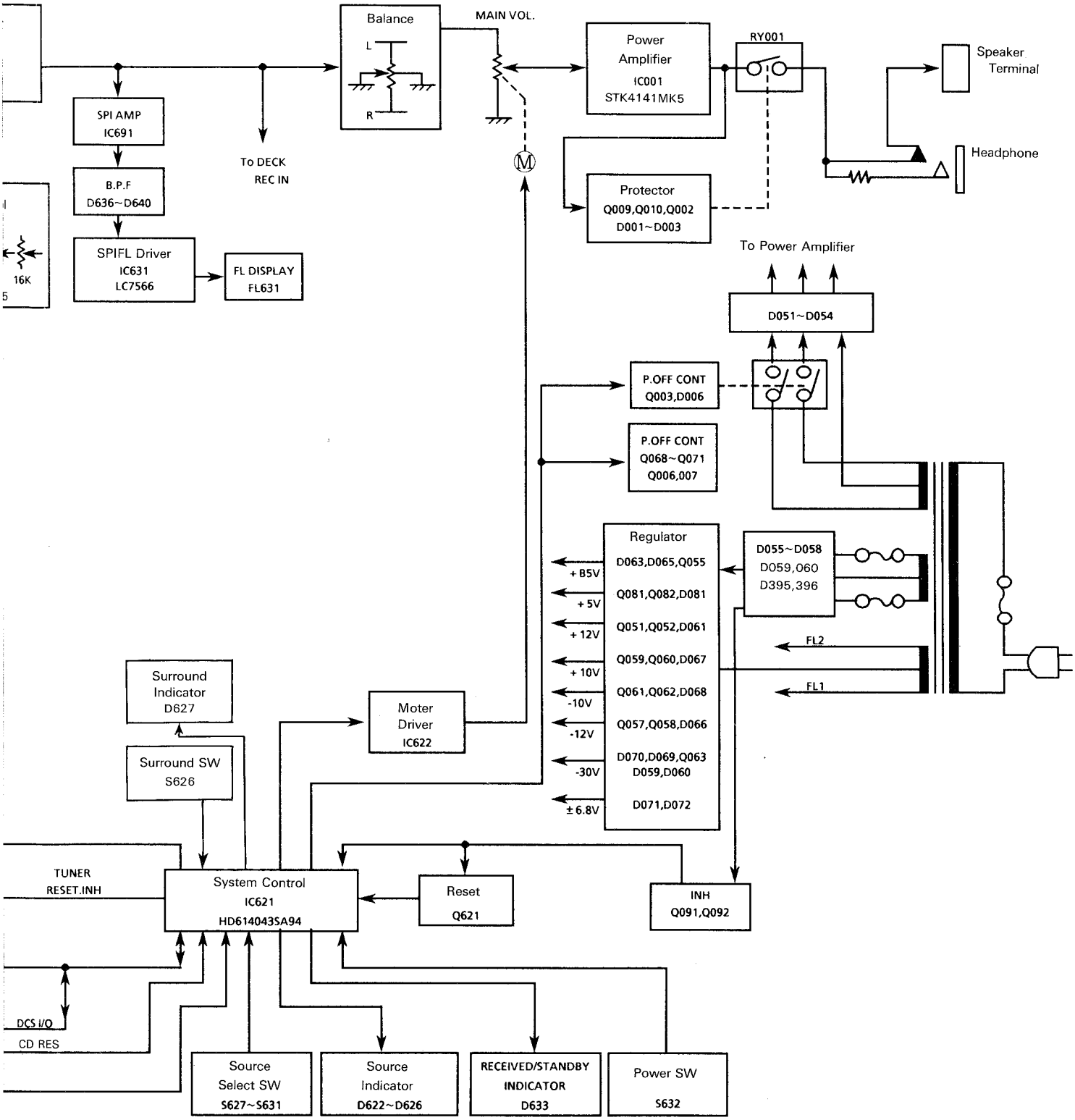



A Deck
BUFFER
IC371
Signal Selector
IC352
Q301,Q302
TAPE
PLAY
JB501
Playing Frequency
Characteristics a djustment
Q447~Q450
VR455~VR458
Playing Mute
Q371,Q372
Playing Mute
Q391~Q393
PB IN
PB OUT
DOLBY NR IC351
REC OUT
REC IN
TAPE
REC
JB101
Recording Mute
Q305,Q306
Recording Level
Adjustment
VR311,VR312
MUSIC SCAN
Amplifier
Q921,Q922
ALC
Q351~Q357
FADE
Control
Q465
HD614081SC34
IC921
DCS
I/O
J925
Mechanism
Control
Microcomputer
LED Control
D961,D963
~D967
Key Matrix
S951~S953
S955~S957
S971~S985

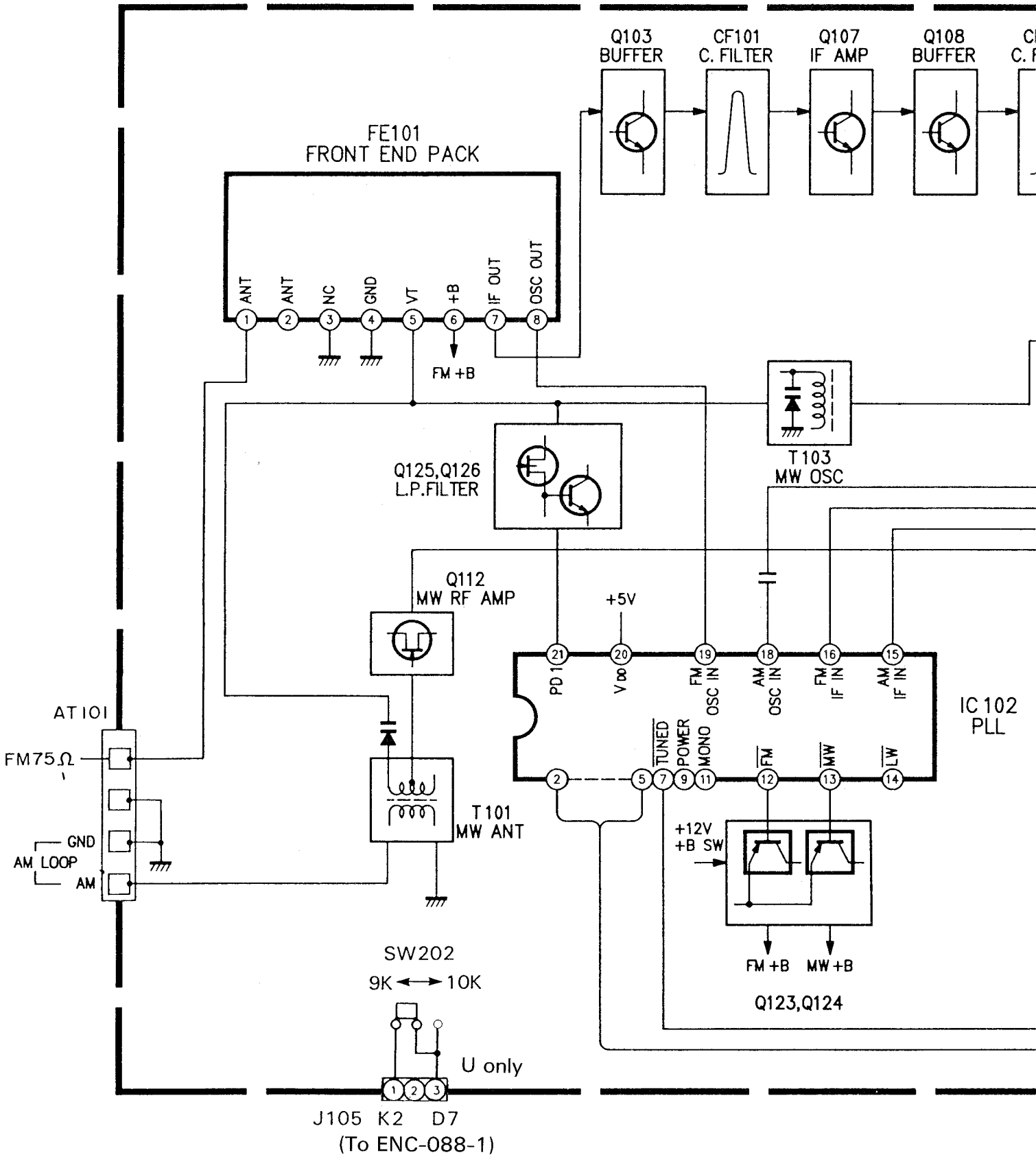
Block Diagrams

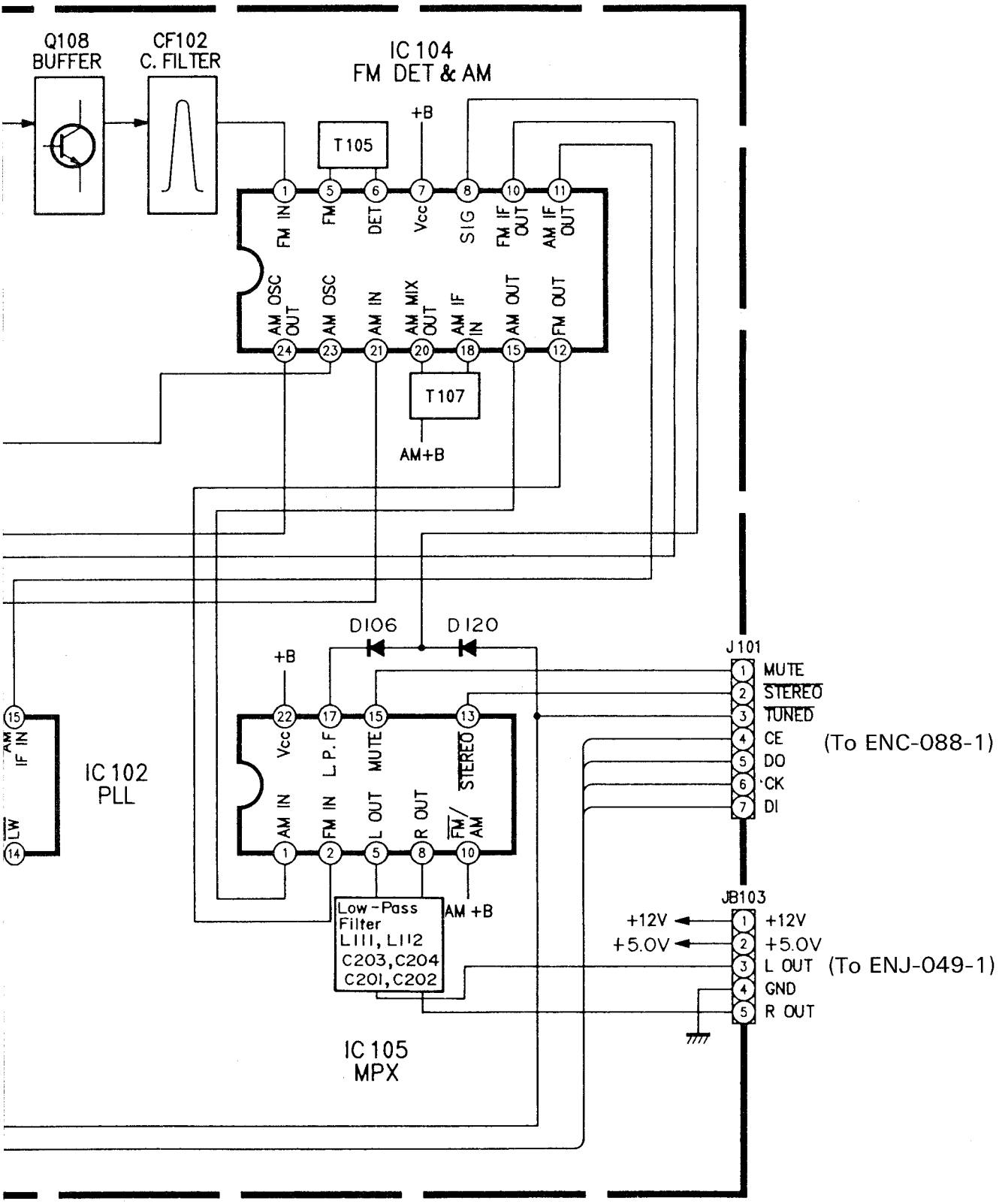
■ System Control & Audio Section



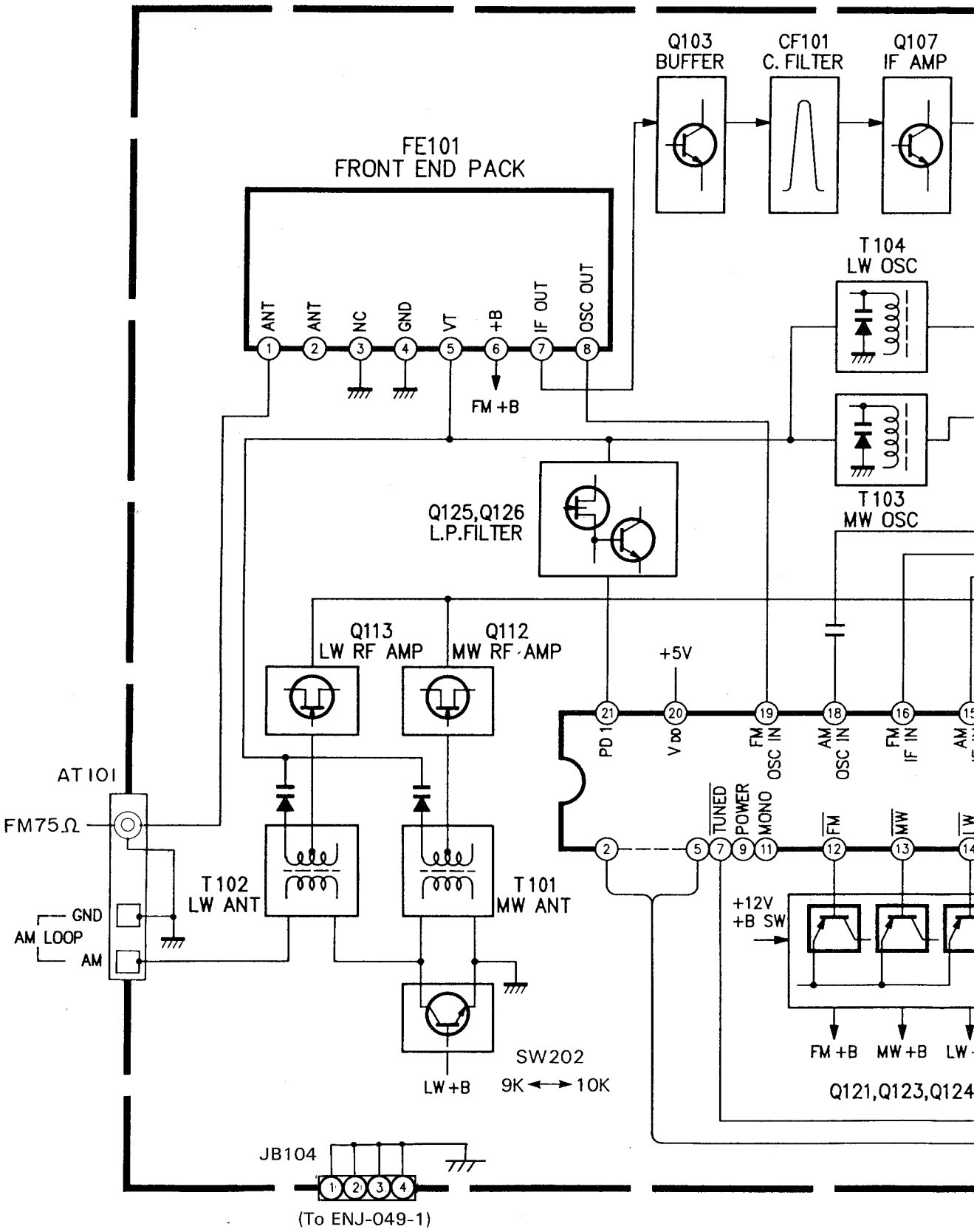

Balance
L
R
MAIN VOL.
Power Amplifier
IC001
STK4141MK5
RY001
Speaker Terminal
Headphone
SPI AMP
IC691
B.P.F
D636~D640
SPIFL Driver
IC631
LC7566
FL DISPLAY
FL631
To DECK
REC IN
16K
Protector
Q009,Q010,Q002
D001~D003
To Power Amplifier
D051~D054
P.OFF CONT
Q003,D006
P.OFF CONT
Q068~Q071
Q006,007
Regulator
+ B5V
D063,D065,Q055
+ 5V
Q081,Q082,D081
+ 12V
Q051,Q052,D061
+ 10V
Q059,Q060,D067
-10V
Q061,Q062,D068
-12V
Q057,Q058,D066
-30V
D070,D069,Q063
D059,D060
±6.8V
D071,D072
D055~D058
D059,060
D395,396
FL2
FL1
Surround Indicator
D627
Surround SW
S626
Moter Driver
IC622
TUNER
RESET.INH
System Control
IC621
HD614043SA94
Reset
Q621
INH
Q091,Q092
DCS I/O
CD RES
Source Select SW
S627~S631
Source Indicator
D622~D626
RECEIVED/STANDBY INDICATOR
D633
Power SW
S632

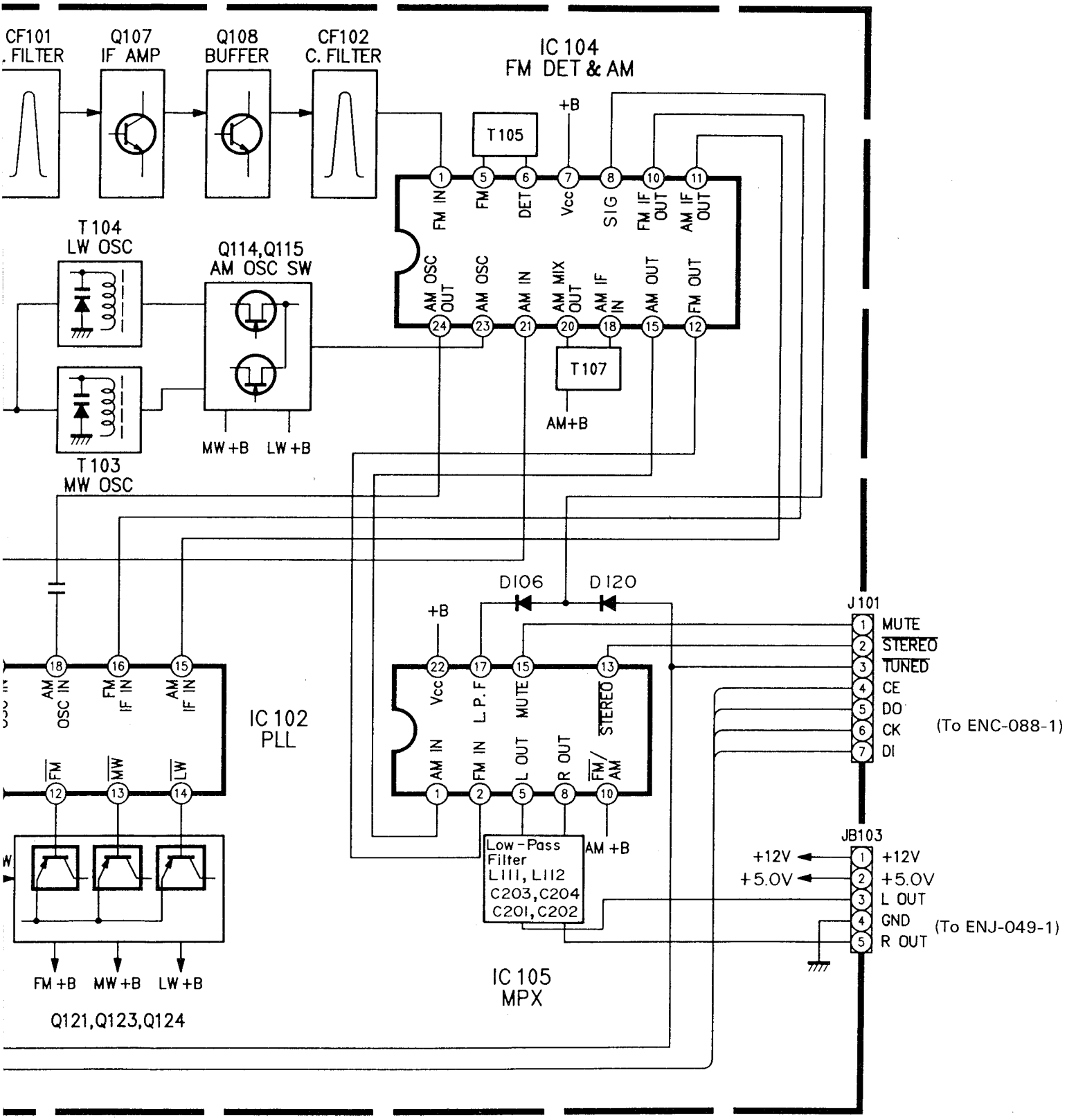
■ Tuner Section (For A, U, J, C)



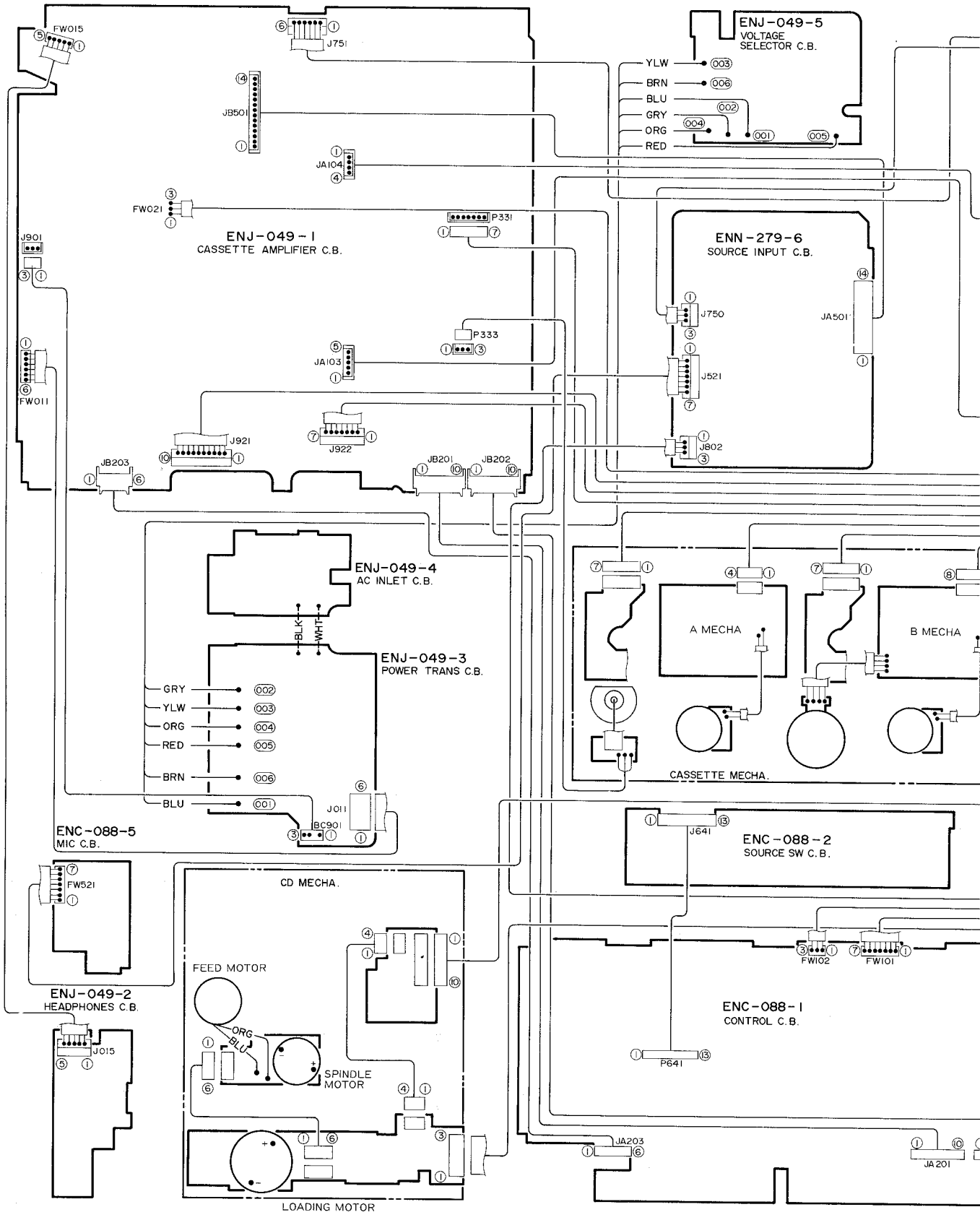

Q108
BUFFER
CF102
C. FILTER
IC 104
FM DET & AM
+B
T105
FM IN
FM
DET
Vcc
SIG
FM IF OUT
AM IF OUT
AM OSC OUT
AM OSC
AM IN
AM MIX OUT
AM IF IN
AM OUT
FM OUT
T107
AM+B
D106
D120
+B
J101
MUTE
STEREO
TUNED
CE
DO
CK
DI
(To ENC-088-1)
IC 102
PLL
AM IF IN
LW
Vcc
L.P.F
MUTE
STEREO
AM IN
FM IN
L OUT
R OUT
FM/AM
Low-Pass Filter
L111, L112
C203, C204
C201, C202
AM +B
JB103
+12V
+5.0V
L OUT
GND
R OUT
(To ENJ-049-1)
IC 105
MPX

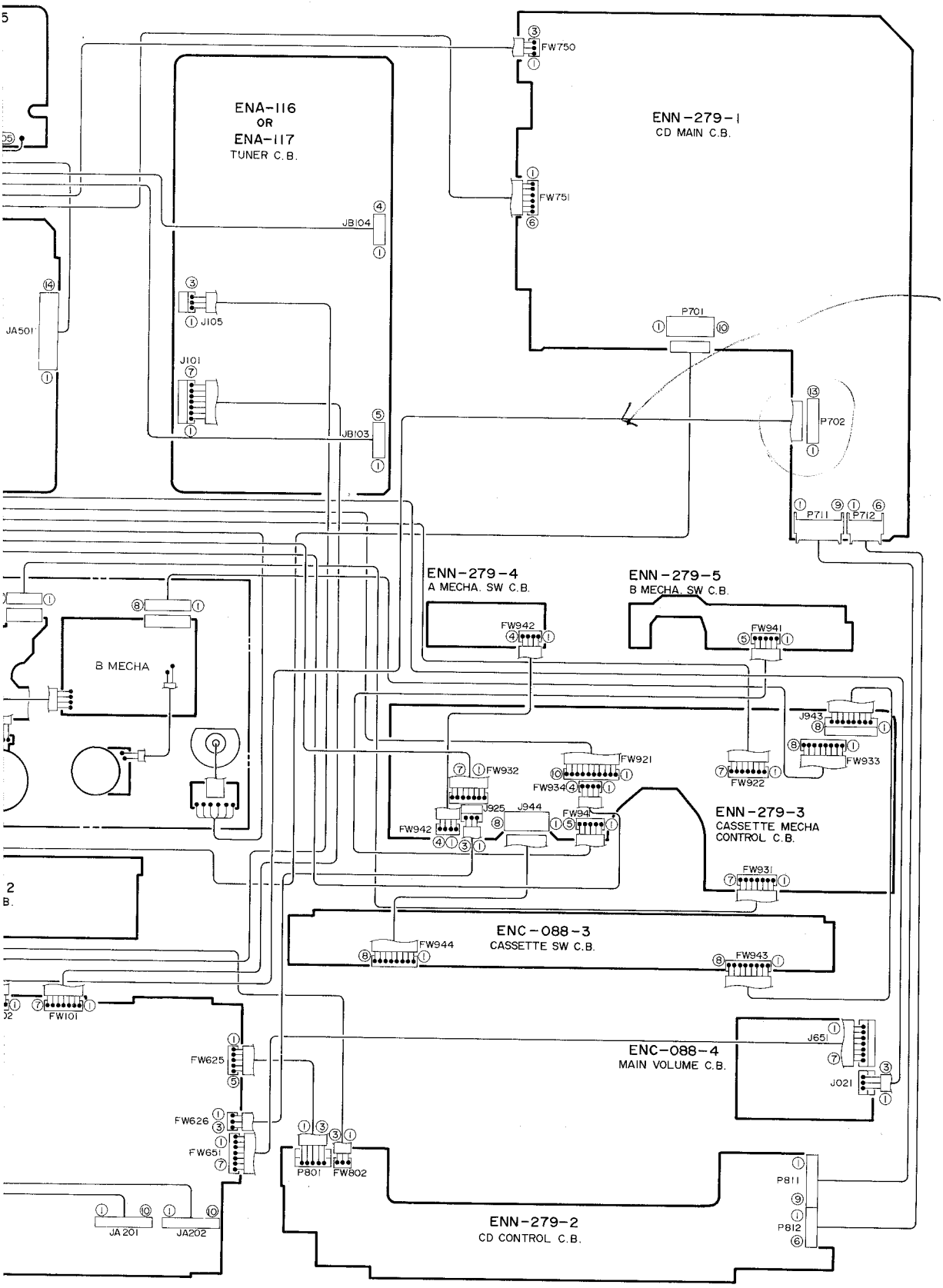
■ Tuner Section (For LBS, LG, LGI, LE, LEF, LV, LVX)




CF101
. FILTER
Q107
IF AMP
Q108
BUFFER
CF102
C. FILTER
IC 104
FM DET & AM
+B
T105
FM IN
FM
DET
Vcc
SIG
FM IF OUT
AM IF OUT
T104
LW OSC
Q114,Q115
AM OSC SW
AM OSC OUT
AM OSC
AM IN
AM MIX OUT
AM IF IN
AM OUT
FM OUT
T107
AM+B
MW+B
LW+B
T103
MW OSC
D106
D120
+B
J101
MUTE
STEREO
TUNED
CE
DO
CK
DI
(To ENC-088-1)
AM OSC IN
FM IF IN
AM IF IN
IC 102
PLL
Vcc
L.P.F
MUTE
STEREO
AM IN
FM IN
L OUT
R OUT
FM/AM
FM
MW
LW
Low-Pass Filter
L111, L112
C203,C204
C201,C202
AM +B
JB103
+12V
+5.0V
L OUT
GND
R OUT
(To ENJ-049-1)
FM+B
MW+B
LW+B
Q121,Q123,Q124
IC 105
MPX

Connection Diagram

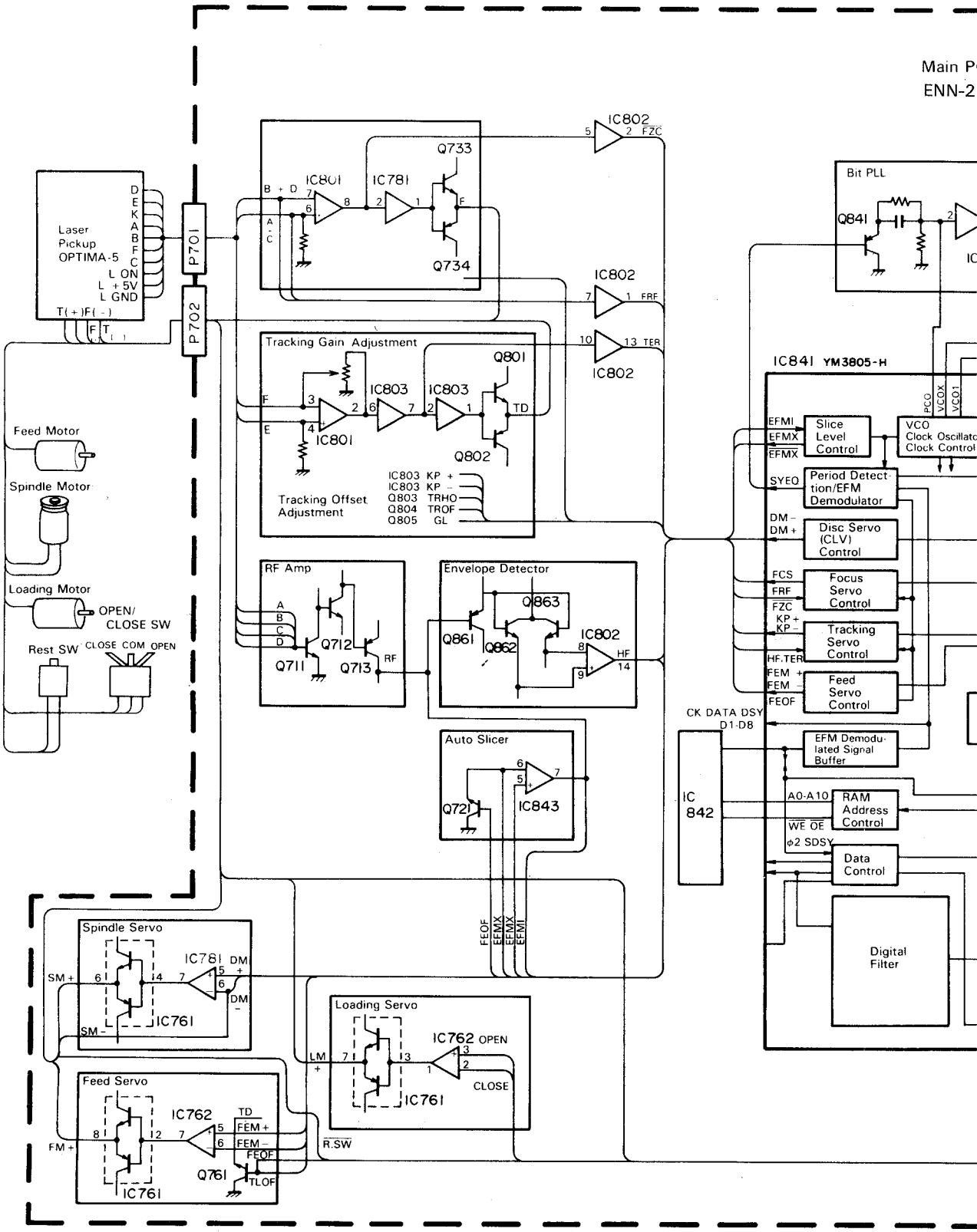




H8.12.24.記)岡本
(本品)ヤ 佐藤さんより

EWR1DE-15TTです

■ CD Section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ENN-2
Laser Pickup OPTIMA-5
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E
K
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L +5V
L GND
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P701
P702
IC801
IC781
Q733
Q734
IC802
FZC
FRF
TER
Tracking Gain Adjustment
Q801
Q802
IC803
TD
Tracking Offset Adjustment
IC803 KP +
IC803 KP −
Q803 TRHO
Q804 TROF
Q805 GL
Feed Motor
Spindle Motor
Loading Motor
OPEN/ CLOSE SW
Rest SW
CLOSE COM OPEN
RF Amp
Q711
Q712
Q713
RF
Envelope Detector
Q861
Q862
Q863
HF
Auto Slicer
Q721
IC843
Bit PLL
Q841
IC841 YM3805-H
PCO
VCOX
VCO1
EFMI
EFMX
EFMX
Slice Level Control
VCO Clock Oscillato Clock Control
SYEO
Period Detection/EFM Demodulator
DM −
DM +
Disc Servo (CLV) Control
FCS
FRF
FZC
KP +
KP −
Focus Servo Control
Tracking Servo Control
HF.TER
FEM +
FEM −
FEOF
Feed Servo Control
CK DATA DSY
D1-D8
IC 842
EFM Demodulated Signal Buffer
A0-A10
WE OE
RAM Address Control
φ2 SDSY
Data Control
Digital Filter
FEOF
EFMX
EFMX
EFMI
Spindle Servo
IC761
IC781
SM +
SM −
DM +
DM −
Loading Servo
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CLOSE
LM +
R.SW
Feed Servo
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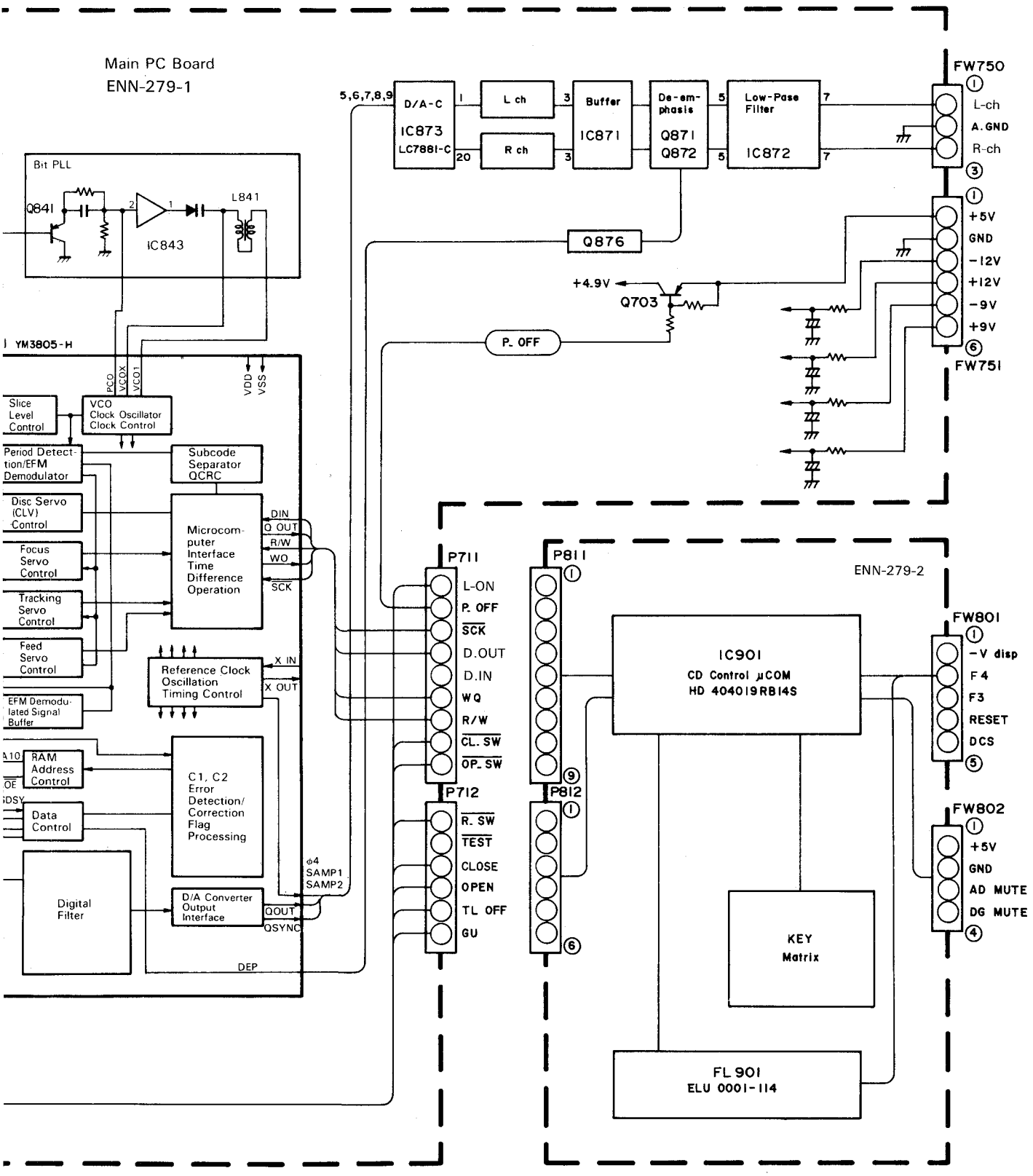
TD
FEM +
FEM −
FEOF
TLOF
Q761
FM +


Main PC Board
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IC843
YM3805-H
PCO
VCOX
VCO1
VDD
VSS
Slice Level Control
VCO Clock Oscillator Clock Control
Period Detection/EFM Demodulator
Subcode Separator QCRC
Disc Servo (CLV) Control
Focus Servo Control
Tracking Servo Control
Feed Servo Control
EFM Demodulated Signal Buffer
Microcomputer Interface Time Difference Operation
DIN
Q OUT
R/W
WQ
SCK
Reference Clock Oscillation Timing Control
X IN
X OUT
RAM Address Control
Data Control
C1, C2 Error Detection/ Correction Flag Processing
Digital Filter
D/A Converter Output Interface
QOUT
QSYNC
DEP
φ4
SAMP1
SAMP2
5,6,7,8,9
D/A-C
IC873
LC7881-C
20
L ch
R ch
Buffer
IC871
De-emphasis
Q871
Q872
Low-Pase Filter
IC872
Q876
+4.9V
Q703
P. OFF
FW750
L-ch
A.GND
R-ch
+5V
GND
-12V
+12V
-9V
+9V
FW751
P711
L-ON
P. OFF
SCK
D.OUT
D.IN
WQ
R/W
CL. SW
OP. SW
P712
R. SW
TEST
CLOSE
OPEN
TL OFF
GU
P811
P812
ENN-279-2
IC901
CD Control μCOM
HD 404019RB14S
FW801
-V disp
F4
F3
RESET
DCS
FW802
+5V
GND
AD MUTE
DG MUTE
KEY Matrix
FL 901
ELU 0001-114

PARTS LIST

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General Exploded View and Parts List

■ Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-CAMX30BKU(S	Front Panel Ass'y	1		J,C,U,A
		EFP-CAMX30BKE(S	Front Panel Ass'y	1		Except J,C,U,A
	1-1	E102408-001SS	Front Panel	1		J,C,U,A
		E102408-002SS	Front Panel	1		Except J,C,U,A
	1-2	E307381-002	Window	1	Tuner	
	1-3	E307383-004	Window	1	Amp	
	1-4	E307387-002	Window	1	CD	
	1-5	E406451-221SS	Remote Plate	1		
	1-6	E406462-001SS	CD FL Screen	1		
	1-7	E406566-002SS	Tuner FL Screen	1		
	1-8	E406567-002SS	Amp FL Screen	1		
	1-9	E60912-003	Speed Nut	3		
	1-10	E69777-003	Reflector Plate	2		
	1-11	PQ42561	JVC Mark	3		
	2	E307378-221SS	CD Fitting	1		
	3	E307404-221SA	Cassette Lid Ass'y	1	A	
	3-1	E307404-221SS	Cassette Lid	1	A	
	3-2	E307385-001	Cassette Lens	1	A	
	3-3	E60912-003	Speed Nut	1	A	
	3-4	PQ42561	JVC Mark	1	A	
	4	E307406-221SA	Cassette Lid Ass'y	1	B	
	4-1	E307406-221SS	Cassette Lid	1	B	
	4-2	E307385-001	Cassette Lens	1	B	
	5	E207061-222SS	Cassette Holder	1	A	
	6	E75600-001	Shaft	2		
	7	E207062-222SS	Cassette Holder	1	B	
	8	E406085-001	Cassette Spring	4		
	9	E307376-221SS	Volume Knob	1		
	10	E307377-221SS	Knob	1	Mic	
	11	SBSG3008M	Screw	4		
	12	E75896-001	Felt Spacer	2	for Front Foot	
	13	GBSG3008Z	Screw	2		
	14	E305654-003	Damper Ass;'y	2		
	15	SBSF3008Z	Screw	4		
	16	E307372-221SS	Push Button	1	CD SEL	
	17	SDSF2608Z	Screw	25		
	18	E307374-221SS	Push Button	1	CD Play	
	19	E406449-001	Indicator	1	REV Mode	
	20	E307412-221SS	Push Button	1	Dolby	
	21	E307414-221SS	Push Button	1	REV Mode	
	22	E207072-001	Push Button Ass'y	1	Cassette Play	
	23	E406450-001	Indicator	1	Rec	
	24	E307368-221SS	Push Button	1	Rec	
	25	E307370-221SS	Push Button	1	Pause	
	26	E406444-001	Indicator	1	Power	
	27	E307365-221SS	Push Button	1	Power	
	28	E307408-221SS	Push Button	1	Timer	
	29	E406111-001	Indicator	1	Surround	
	30	E307389-001	Indicator	1	Source	
	31	E207066-001SS	Push Button	1	Source	
	32	E307361-221SS	Push Button	1	Tuning	
	33	E307363-221SS	Push Button	1	PRE. Down	
	34	E207063-221	Metal Cover	1		
	35	SDSG3008M	Screw	9		
	36	E406597-001SS	Protect Cover	1		
	37	EXO010005R95S13	Felt Spacer	1		
	38	E307487-002SS	Holder	1		
	39	E406558-001	Special Screw	3		
	40	E406457-001	Lock Cam Ass'y	1	Right	
	41	E406456-001	Lock Cam Ass'y	1	Left	

⚠: Safety Parts

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	42	E305914-001	Leaf Spring	1		
	43	E307395-222SS	Holder Bracket	2		
	44	E406459-001SS	Holder Spring	1	Right	
	45	E406458-001SS	Holder Spring	1	Left	
	46	————	Cassette Mechanism Ass'y	1	See page 2-7	
	47	SBSF3010C	Screw	4		
	48	SBSG3008C	Screw	4		
	49	E72108-001	Wire Clamp	1		
	50	EXO010008R80S13	Spacer	1		
	51	SBSG3008N	Screw	13		
	52	E102403-221SS	Chassis Base	1		
	53	SBST3006Z	Screw	4		
	54	E47227-012	Foot	2	Rear	
	55	SBSG3010N	Screw	2	for Rear Foot	
	56	EXO015004R30S	Spacer	2		
	57	E406507-001	Mecha Caution Label	1		Except J
⚠	58	ETP1070-23EAJ	Power Transformer	1		Except J , C , U , BS
⚠		ETP1070-23JAJ	Power Transformer	1		J , C
⚠		ETP1070-23FAJ	Power Transformer	1		U
⚠		ETP1070-23EAJBS	Power Transformer	1		BS
	59	E65389-004	Special Screw	4		
⚠	60	QMF51E2-1R0J1	Fuse	1	F001	Except J , C , U , BS
⚠		QMF51U1-2R5	Fuse	1	F001	J , C
⚠		QMF51E2-2R0J1	Fuse	1	F001	U
⚠		QMF51E2-1R0J1BS	Fuse	1	F001	BS
	61	E306805-026	Spacer	1		
	62	E307552-001	Fastener	2		
	63	E307551-001SS	Protect Cover	1		U
	64	E12289-222SS	CD Tray	1		
	65	SBSF3008M	Screw	3		
	66	————	CD Mechanism Unit Ass'y	1	See page 2-10	
	67	EWR1DE-15TT	H. Card	1	13Pin	
	68	EWS26A-B918	Socket Wire Ass'y	1	10pin	
	69	EWS254-B103	Socket Wire Ass'y	1	4Pin	
	70	EWS256-B102	Socket Wire Ass'y	1	6Pin	
	71	E75871-003	Special Screw	2		
	72	E306837-003	Clamper Base Ass'y	1		
	72-1	E306836-003	Yoke	1		
	72-2	E74897-002	Magnet	1		
	72-3	E26756-001	Clamper Base	1		
	72-4	E306835-001	Clamper	1		
	73	E307451-001SS	Stay Bracket	1	Left	
	74	E307390-222SS	Side Bracket	1	Left	
	75	E307411-221SS	Stay Bracket	1	Right	
	76	E307391-222SS	Side Bracket	1	Right	
	77	E406569-221SS	Shield Plate	1		
	78	E71335-001	Fastener	1		
	79	E307393-222SS	Heat Sink	1		
⚠	80	QMF51E2-1R25J1	Fuse	2	F101 , F102	Except J , C , BS
⚠		QMF51U1-1R6	Fuse	2	F101 , F102	J , C
⚠		QMF51E2-1R2J1BS	Fuse	2	F101 , F102	BS
	81	EXO080010H03S11	Spacer	1		
	82	SBSG3012Z	Screw	1		
	83	E48729-008	Plastic Rivet	1		
	84	E307449-221SS	Leaf Spring	1		
	85	E307566-001SS	Protect Cover	1		U
⚠	86	QMF51E2-1R0J1	Fuse	1	F002	U
	87	E102410-007SS	Rear Panel	1		J
		E102410-008SS	Rear Panel	1		U
		E102410-009SS	Rear Panel	1		A

⚠: Safety Parts

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
		E102410-010SS	Rear Panel	1		E , EF , GI
		E102410-011SS	Rear Panel	1		BS
		E102410-012SS	Rear Panel	1		G , V , VX
		E102410-014SS	Rear Panel	1		C
	—	E306019-103	Rating Label	1	Made in Singapore	U
	88	E73273-003	Special Screw	14		J , C , A , BS
		E73273-003	Special Screw	15		E , EF , G , GI , V , VX
		E73273-003	Special Screw	16		U
	89	EXO020010R10S	Spacer	2		
	—	E61029-005	Number Label	1		
	—	E70891-001	Class 1 Label	1		Except J , C
	—	E72423-001	Caution Label	1		C
	—	E76016-001	UL Caution Label	1		J
	—	E67199-001	FISE Caution Label	1		J
	—	QZL1001-001	UL Label	1		J
	—	E65507-001	Caution Label	1		C
	—	E45858-002	CSA Label	1		C
	—	E70028-001	Approval Label	1		E
	—	E74792-104	FTZ Label	1		G
	—	E72430-002	Label	1		U

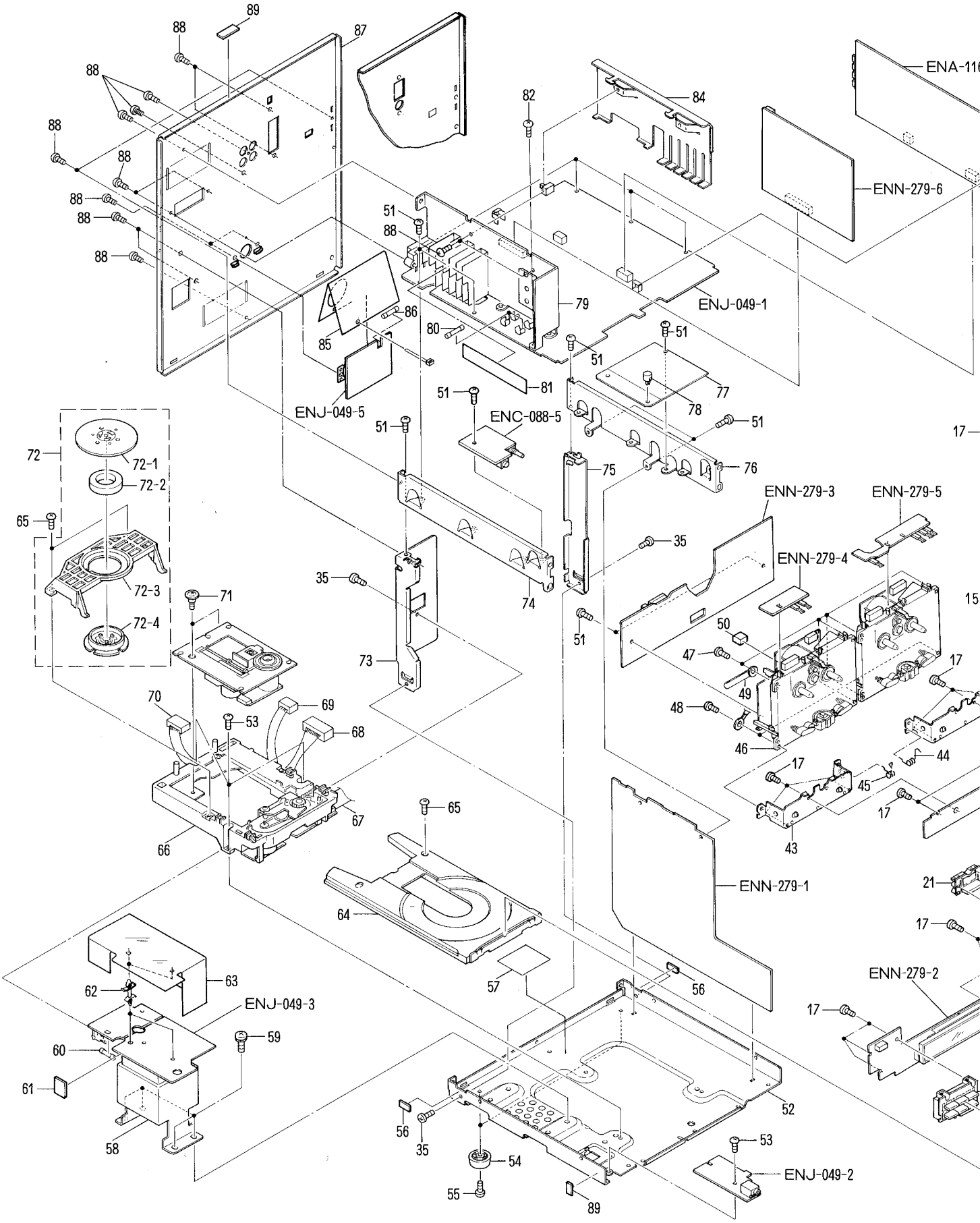
⚠: Safety Parts

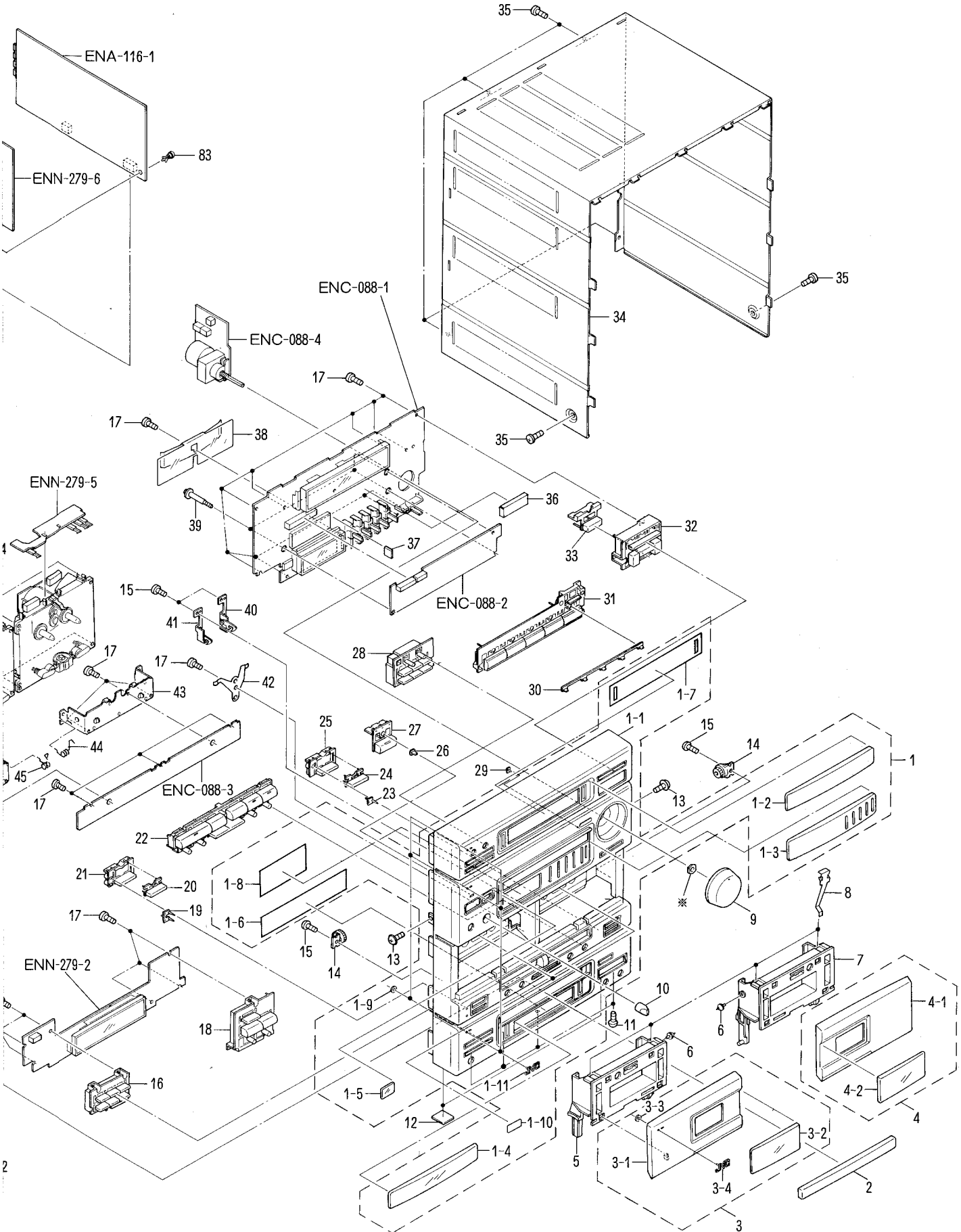
The Marks Designated Areas

J·····the U.S.A.
C·····Canada
A·····Australia
G·····Germany
GI·····Italy
BS·····the U.K.

E , EF·····Continental Europe
V·····East Europe
U·····Universal Type
VX·····Poland , Soviet Union and Rumania
No mark indicates all areas.

■ Exploded View

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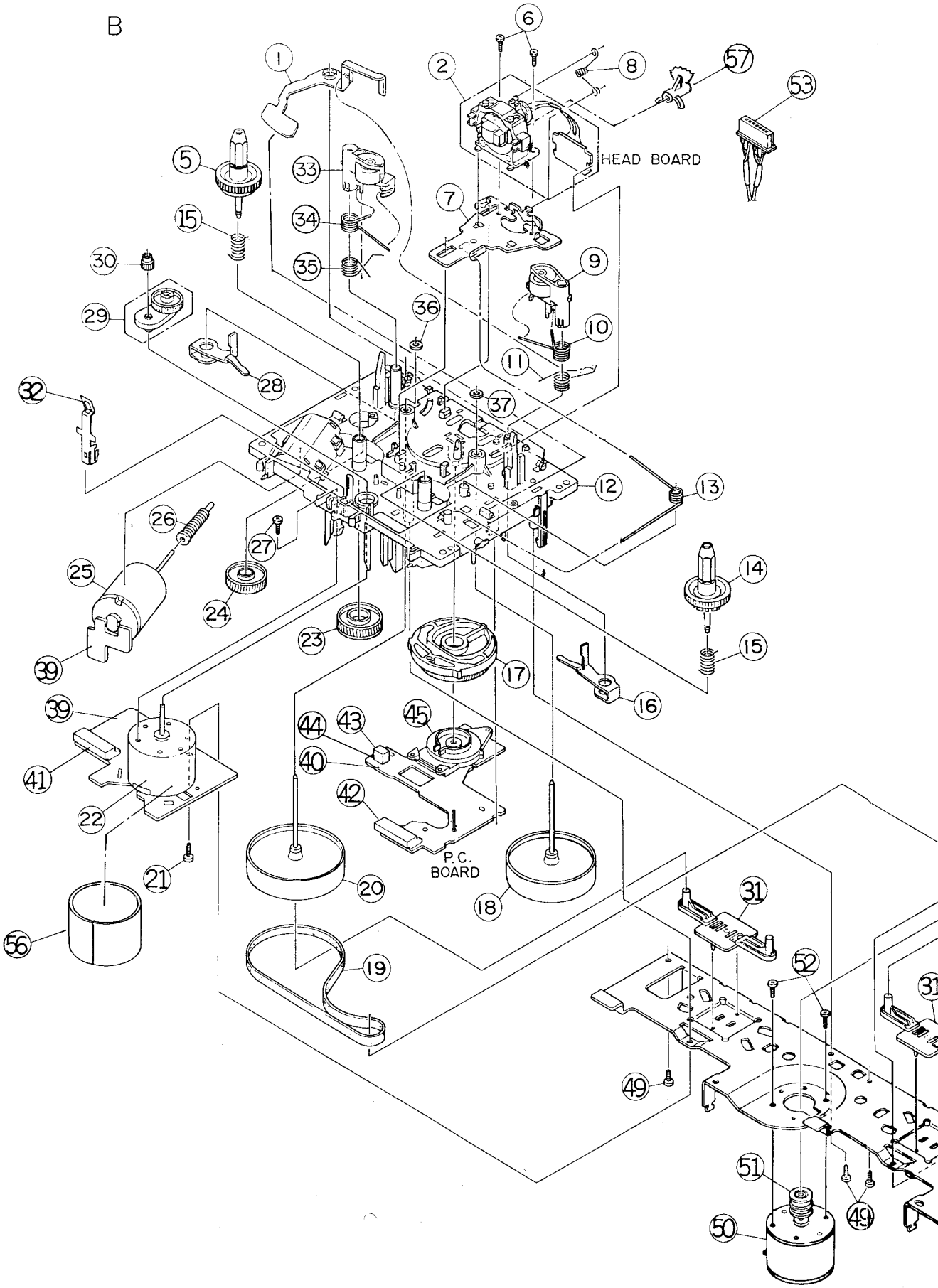
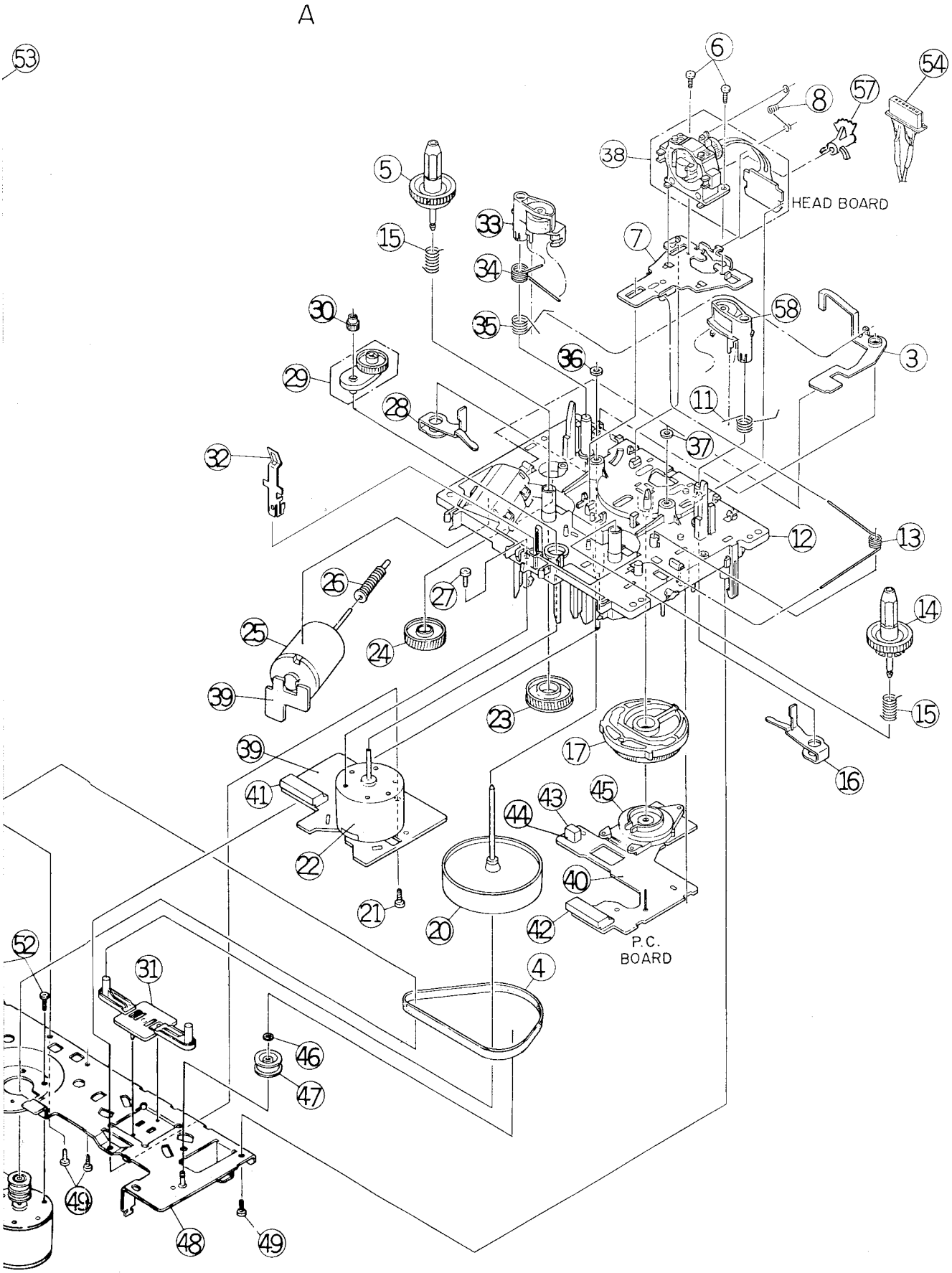
Cassette Mechanism Ass'y and Parts List



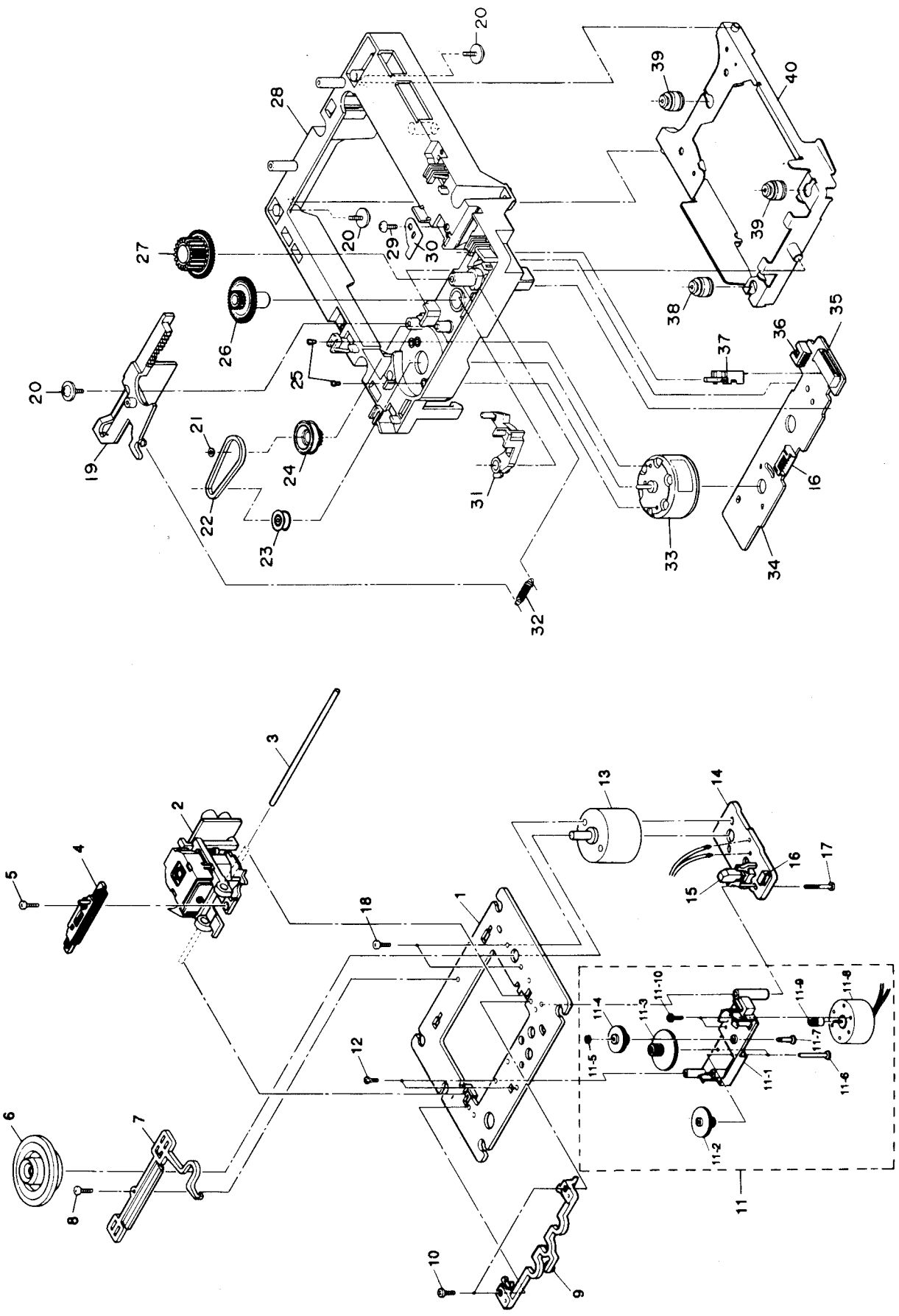

A
HEAD BOARD
P.C.
BOARD

■ Cassette Mechanism Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	VKL7130-001	Eject Safety	1	B Mechanism	
2	VDG5149-002MB1	Head Mount Ass'y	1	B Mechanism	
3	VKL7131-001	Eject Safety	1	A Mechanism	
4	VKB3001-052	Belt	1	A Mechanism	
5	VKS5321-00A	Reel Ass'y	2	Right	
6	SDST2004Z	Screw	4	Head Mount Ass'y	
7	VKL6942-00B	Head Base Ass'y	2		
8	VKW4914-001	Head Spring	2		
9	VKP4221-00A	Pinch Roller Ass'y	1	B Mechanism (Left)	
10	VKW3006-213	Torsion Spring	1	B Mechanism (Left)	
11	VKW4933-001	Torsion Spring	2	Left	
12	VKS1112-00A	Chassis Base Ass'y	2		
13	VKW4930-002	Return Spring	2		
14	VKS3480-001	Reel Ass'y	2	Left	
15	VKW4928-001	B.T. Spring	4	Reel Ass'y	
16	VKL6940-001	Pinch Roller Lever	2	Left	
17	VKS2209-002	Controller Cam	2		
18	VKF3174-00A	Flywheel Ass'y	1	B Mechanism (Left)	
19	VKB3001-048	Belt	1	B Mechanism	
20	VKF3172-00A	Flywheel Ass'y	2	Right	
21	SDSF2608Z	Screw	2		
22	MMN-6F4RA88	D.C. Motor	2	Reel	
23	VKS5331-001	Gear (6)	2		
24	VKS5330-001	Gear (5)	2		
25	MXN-13FB12F	D.C. Motor	2	Cam	
26	VKS5329-001	Gear (4)	2		
27	SDSP2605Z	Screw	2		
28	VKL6939-001	Pinch Roller Lever	2	Right	
29	VKS5325-00B	FR Arm Ass'y	2		
30	VKS5328-002	Reel Motor Gear	2		
31	VKS5327-002	Trust Plate	2		
32	VKY4628-001	Pack Spring	2		
33	VKP4219-00A	Pinch Roller Ass'y	2	Right	
34	VKW3006-212	Torsion Spring	2	Right	
35	VKW4932-001	Torsion Spring	2	Right	
36	VKZ4035-009	Washer	2	Right	
37	Q03093-527	Washer	2	Left	
38	VDG5149-002MA1	Head Mount Ass'y	1	A Mechanism	
39	VMW3272-001	Printed Board	2		
40	VMW3273-001	Printed Board	2		
41	VMC0107-R08	Connector	1	B Mechanism	
42	VMC0107-R07	Connector	2		
43	DN6851A	Hall IC	2		
44	VKS3487-001	IC Holder	2		
45	VKS3495-00A	Cam Switch Ass'y	2		
46	WDL163525-4	Washer	1		
47	VKR4631-002	Idler Pulley	1		
48	VKM3419-00C	FM Bracket	1		
49	SDSF2605Z	Screw	4		
50	MMI-6H2LWSK	Motor	1	Capstan	
51	VKR4632-001	Motor Pulley	1		
52	SPSP2603Z	Screw	2		
53	VDM007P-040	Head Wire	1	B Mechanism	
54	VDM003P-040	Head Wire	1	A Mechanism	
55	VMC0107-R04	Connector	1	A Mechanism	
56	FE-ZMS514	Shield Cor	1	B Mechanism	
57	VKS3485-002	Head Gear	2		
58	VKP3118-001	Pinch Roller	1	A Mechanism (Left)	

⚠: Safety Parts

CD Mechanism Ass'y and Parts List



■CD Mechanism Parts List

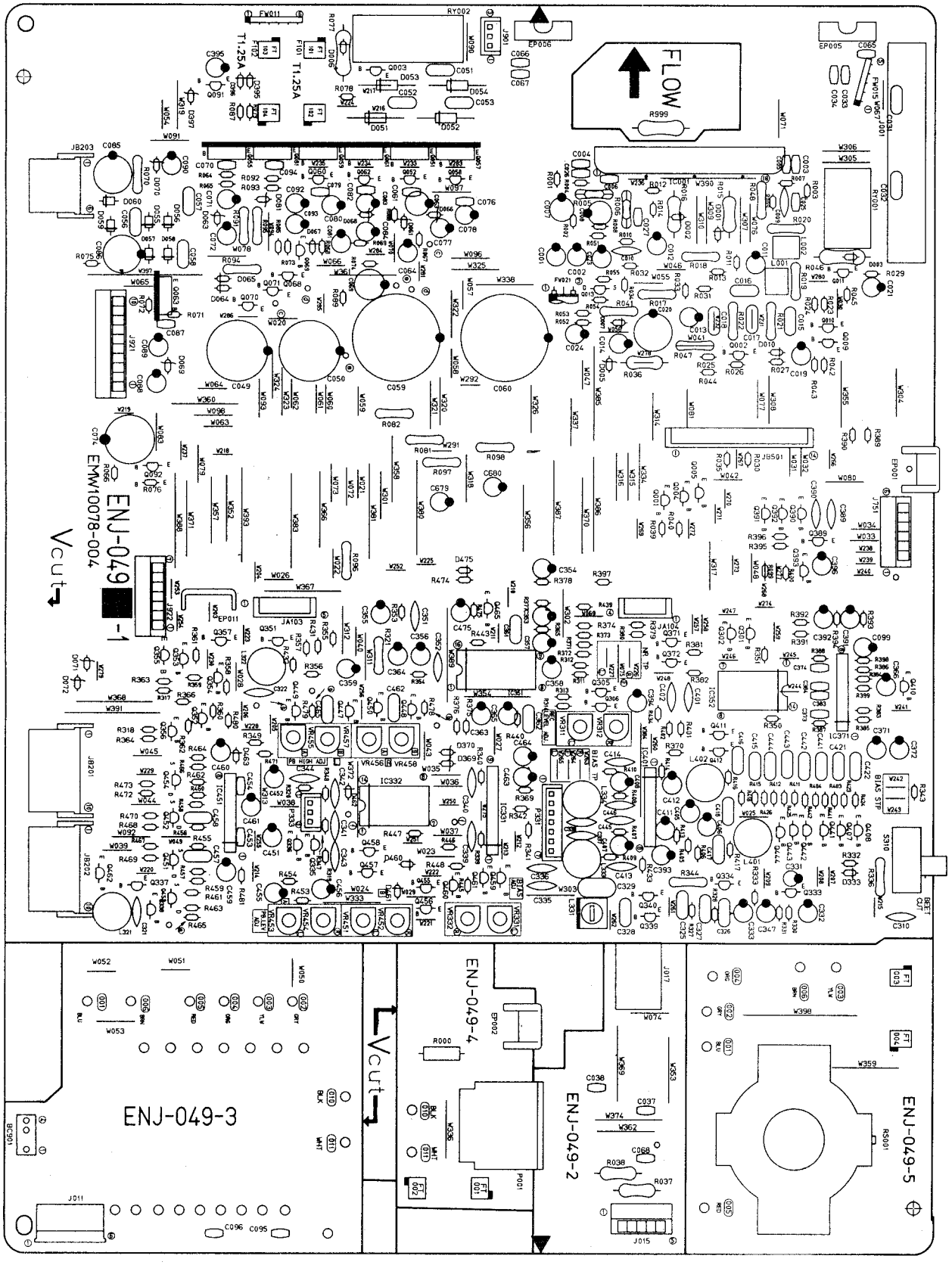
Item	Part Number	Part Name	Q'ty	Description	Areas
1	E26487-003	Mechanism Base	1		
2	OPTIMA-5S	Pick up Ass'y	1		
3	E74930-003	Shaft	1		
4	E306282-001	Rack Ass'y	1		
5	SPSH2050M	Screw	1		
6	E406064-002	Turn Table Ass'y	1		
7	E306275-003	Support	1		
8	SDST2005Z	Screw	1		
9	E306277-001	Holder	1		
10	SDST2004Z	Screw	2		
11	SE10351-11	Gear Ass'y	1		
11-1	E306276-001	Gear Base	1		
11-2	E75444-001	Gear	1		
11-3	E75443-001	Gear	1		
11-4	E75445-001	Gear	1		
11-5	WDM163550	Slit Washer	1		
11-6	E75494-003	Shaft	2		
11-7	E75494-002	Shaft	1		
11-8	HKN-3A6RDNV	Feed Motor	1		
11-9	E75493-001	Pinion Gear	1		
11-10	LPSH1735Z	Screw	2		
12	E72713-001	Screw	2		
13	E74539-001B	Spindle Motor	1		
14	E12114-005(S)	Circuit Board	1		
15	ESB1100-005	Leaf Switch	1	S001	
16	EMV5109-006B	6P Plug Ass'y	2	P011	
17	E75832-001	Screw	1		
18	SDSP2003N	Screw	2		
19	E306834-001	Cam	1		
20	E65923-003	Screw	3		
21	E72024-001	Speed Nut	1		
22	E75950-002	Belt	1		
23	E75984-001	Motor Pulley	1		
24	E75985-001	Gear (1)	1		
25	SPSK2640Z	Screw	2		
26	E75986-002	Gear (2)	1		
27	E75987-001	Gear (3)	1		
28	E12288-002	Loading Base	1		
29	SBSF3008Z	Screw	1		
30	E75988-001	Plate	1		
31	E306833-001	Lever	1		
32	E75989-001	Spring	1		
33	MMN-6F1LB8Q	Loading Motor	1		
34	EMW10060-002(S)	Circuit Board	1		
35	EMV7123-013R	Connector	1	13Pin	
36	EMV5109-004B	Plug Ass'y	1	4Pin	
37	ESS1200-002	Switch	1		
38	E75609-002	Insulator	1		
39	E75609-001	Insulator	2		
40	E307087-001	Elevator Base Ass'y	1		

⚠: Safety Parts

Printed Circuit Board Ass'y and Parts List

■ENJ-049 □ Power & Cassette Amplifier PC Board Ass'y

Note : ENJ-049 □ varies according to the areas employed. See note (1) when placing an order.



Note(1)

PC Board Ass'y	Designated Areas
ENJ-049 [A]	the U.S.A. , Canada
ENJ-049 [B]	Universal Type
ENJ-049 [C]	Australia
ENJ-049 [D]	Continental Europe , East Europe , Poland , Soviet Union and Rumania
ENJ-049 [E] BS	the U.K.
ENJ-049 [F]	Germany , Italy

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q001	2SD2144S(VW)	SILICON	ROHM	
	Q002	2SC1740S(R,S)	SILICON	ROHM	
	Q003	2SC1740S(R,S)	SILICON	ROHM	
	Q004	2SD2144S(VW)	SILICON	ROHM	
	Q005	DTA144ES	SILICON	ROHM	
	Q009	2SC1740S(R,S)	SILICON	ROHM	
	Q010	2SA933S(R,S)	SILICON	ROHM	
	Q011	2SC1740S(R,S)	SILICON	ROHM	
	Q013	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q051	2SD2061(E,F)	SILICON	ROHM	
	Q052	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q055	2SD2061(E,F)	SILICON	ROHM	
	Q057	2SB1187(E,F)	SILICON	ROHM	
	Q058	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q059	2SD2061(E,F)	SILICON	ROHM	
	Q060	2SC1685(Q,R)	SILICON	MATSUSHITA	
	Q061	2SB1187(E,F)	SILICON	ROHM	
	Q062	2SA564A(Q,R)	SILICON	MATSUSHITA	
	Q063	2SB1187(E,F)	SILICON	ROHM	
	Q068	DTC144ES	SILICON	ROHM	
	Q069	DTA114YS	SILICON	ROHM	
	Q070	DTA144ES	SILICON	ROHM	
	Q071	DTC114YS	SILICON	ROHM	
	Q081	2SD2061(E,F)	SILICON	ROHM	
	Q091	DTC114YS	SILICON	ROHM	
	Q092	DTC114YS	SILICON	ROHM	
	Q301	DTC144ES	SILICON	ROHM	
	Q302	DTC144ES	SILICON	ROHM	
	Q305	2SD2144S(VW)	SILICON	ROHM	
	Q306	2SD2144S(VW)	SILICON	ROHM	
	Q333	2SC1740S(R,S)	SILICON	ROHM	
	Q334	2SC1740S(R,S)	SILICON	ROHM	
	Q335	DTC144ES	SILICON	ROHM	
	Q336	DTC144ES	SILICON	ROHM	
	Q337	DTC144ES	SILICON	ROHM	
	Q338	DTC144ES	SILICON	ROHM	
	Q339	2SC1740S(R,S)	SILICON	ROHM	
	Q340	2SC1740S(R,S)	SILICON	ROHM	
	Q351	2SC1740S(R,S)	SILICON	ROHM	
	Q352	2SC1740S(R,S)	SILICON	ROHM	
	Q353	2SC1740S(R,S)	SILICON	ROHM	
	Q354	2SC1740S(R,S)	SILICON	ROHM	
	Q355	2SC1740S(R,S)	SILICON	ROHM	
	Q356	2SC1740S(R,S)	SILICON	ROHM	
	Q357	2SC1740S(R,S)	SILICON	ROHM	
	Q371	2SD2144S(VW)	SILICON	ROHM	
	Q372	2SD2144S(VW)	SILICON	ROHM	
	Q389	DTC144ES	SILICON	ROHM	
	Q390	DTC144ES	SILICON	ROHM	
	Q391	2SD2144S(VW)	SILICON	ROHM	
	Q392	2SD2144S(VW)	SILICON	ROHM	
	Q393	DTA144ES	SILICON	ROHM	
	Q407	DTC144TS	SILICON	ROHM	
	Q408	DTC144TS	SILICON	ROHM	
	Q410	DTC144ES	SILICON	ROHM	
	Q411	DTC144TS	SILICON	ROHM	
	Q412	DTC144TS	SILICON	ROHM	
	Q441	DTC144TS	SILICON	ROHM	
	Q442	DTC144TS	SILICON	ROHM	
	Q443	DTC144TS	SILICON	ROHM	
	Q444	DTC144TS	SILICON	ROHM	
	Q447	DTC114YS	SILICON	ROHM	
	Q448	DTC114YS	SILICON	ROHM	
	Q449	DTC114YS	SILICON	ROHM	
	Q450	DTC114YS	SILICON	ROHM	
	Q451	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q452	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q453	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q454	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q455	DTC114YS	SILICON	ROHM	

⚠ : SAFETY PARTS

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q456	DTC114YS	SILICON	ROHM	
	Q457	DTC114YS	SILICON	ROHM	
	Q458	DTC114YS	SILICON	ROHM	
	Q459	DTC114YS	SILICON	ROHM	
	Q460	2SA933S(R,S)	SILICON	ROHM	
	Q461	DTA114YS	SILICON	ROHM	
	Q462	DTC144ES	SILICON	ROHM	
	Q465	DTA114YS	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC001	STK4141MK5	I.C.	SANYO	
	IC331	BA3126N	I.C.	ROHM	
	IC332	BU4066B	I.C.	ROHM	
	IC351	HA12136A	I.C.	HITACHI	
	IC352	BU4066B	I.C.	ROHM	
	IC371	BA15218N	I.C.	ROHM	
	IC401	BA15218N	I.C.	ROHM	
	IC451	UPC1228HA	I.C.	NEC	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D001	1SS133	SILICON	ROHM	
	D002	1SS133	SILICON	ROHM	
	D003	1SS133	SILICON	ROHM	
	D005	MTZ12JC	ZENER	ROHM	
	D006	1SS133	SILICON	ROHM	
	D007	1SS133	SILICON	ROHM	
	D010	1SS133	SILICON	ROHM	
	D051	ERB12-02RKL1	SILICON	KYOUDOU	
	D052	ERB12-02RKL1	SILICON	KYOUDOU	
	D053	ERB12-02RKL1	SILICON	KYOUDOU	
	D054	ERB12-02RKL1	SILICON	KYOUDOU	
	D055	1SR139-200	SILICON	ROHM	
	D056	1SR139-200	SILICON	ROHM	
	D057	1SR139-200	SILICON	ROHM	
	D058	1SR139-200	SILICON	ROHM	
	D059	1SR139-200	SILICON	ROHM	
	D060	1SR139-200	SILICON	ROHM	
	D061	MTZ13JC	ZENER	ROHM	
	D063	MTZ6.2JC	ZENER	ROHM	
	D064	1SS133	SILICON	ROHM	
	D065	1SS133	SILICON	ROHM	
	D066	MTZ13JC	ZENER	ROHM	
	D067	MTZ10JC	ZENER	ROHM	
	D068	MTZ10JC	ZENER	ROHM	
	D069	MTZ30JC	ZENER	ROHM	
	D070	MTZ6.8JC	ZENER	ROHM	
	D071	MTZ7.5JC	ZENER	ROHM	
	D072	MTZ7.5JC	ZENER	ROHM	
	D081	MTZ5.6JC	ZENER	ROHM	
	D333	1SS133	SILICON	ROHM	
	D369	MTZ7.5JC	ZENER	ROHM	
	D370	MTZ7.5JC	ZENER	ROHM	
	D395	1SS119	SILICON	HITACHI	
	D396	1SS119	SILICON	HITACHI	
	D397	MTZ5.6JC	ZENER	ROHM	
	D460	1SS133	SILICON	ROHM	
	D461	1SS133	SILICON	ROHM	
	D462	1SS133	SILICON	ROHM	
	D463	1SS133	SILICON	ROHM	
	D475	1SS133	SILICON	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C001	QETB1HM-475	4.7MF	50V	ELECTRO	
	C002	QETB1HM-475	4.7MF	50V	ELECTRO	
	C003	QCBB1HK-331	330PF	50V	CERAMIC	
	C004	QCBB1HK-331	330PF	50V	CERAMIC	
	C005	QCBB1HK-820	82PF	50V	CERAMIC	
	C006	QCBB1HK-820	82PF	50V	CERAMIC	
	C007	QETB1CM-107	100MF	16V	ELECTRO	
	C008	QETB1CM-107	100MF	16V	ELECTRO	
	C009	QCS21HJ-5R0	5PF	50V	CERAMIC	
	C010	QCS21HJ-5R0	5PF	50V	CERAMIC	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C011	QETB1HM-226	22MF	50V	ELECTRO	
	C012	QETB1HM-226	22MF	50V	ELECTRO	
	C013	QETB1HM-476	47MF	50V	ELECTRO	
	C014	QETB1CM-476	47MF	16V	ELECTRO	
	C015	QFLB1HJ-473	0.047MF	50V	MYLAR	A
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	B
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	C
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	D
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	EBS
	C015	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C016	QFLB1HJ-473	0.047MF	50V	MYLAR	A
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	B
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	C
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	D
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	EBS
	C016	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	B
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	C
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	D
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	EBS
	C017	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	B
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	C
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	D
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	EBS
	C018	QFLB1HJ-104	0.1MF	50V	MYLAR	F
	C019	QETB1CM-226	22MF	16V	ELECTRO	
	C020	QETB2AM-476	47MF	100V	ELECTRO	
	C021	QETB1AM-476	47MF	10V	ELECTRO	
	C023	QEK51HM-224G	0.22MF	50V	ELECTRO	
	C024	QETB1HM-474	0.47MF	50V	ELECTRO	
	C031	QFLB1HJ-152	1500PF	50V	MYLAR	D
	C031	QFLB1HJ-152	1500PF	50V	MYLAR	EBS
	C031	QFLB1HJ-152	1500PF	50V	MYLAR	F
	C032	QFLB1HJ-152	1500PF	50V	MYLAR	D
	C032	QFLB1HJ-152	1500PF	50V	MYLAR	EBS
	C032	QFLB1HJ-152	1500PF	50V	MYLAR	F
	C033	QCGB1HK-102	1000PF	50V	CERAMIC	D
	C033	QCGB1HK-102	1000PF	50V	CERAMIC	EBS
	C033	QCGB1HK-102	1000PF	50V	CERAMIC	F
	C034	QCGB1HK-102	1000PF	50V	CERAMIC	D
	C034	QCGB1HK-102	1000PF	50V	CERAMIC	EBS
	C034	QCGB1HK-102	1000PF	50V	CERAMIC	F
	C037	QCBB1HK-471	470PF	50V	CERAMIC	D
	C037	QCBB1HK-471	470PF	50V	CERAMIC	EBS
	C037	QCBB1HK-471	470PF	50V	CERAMIC	F
	C038	QCBB1HK-471	470PF	50V	CERAMIC	D
	C038	QCBB1HK-471	470PF	50V	CERAMIC	EBS
	C038	QCBB1HK-471	470PF	50V	CERAMIC	F
	C049	QETB1VM-228N	2200MF	35V	ELECTRO	
	C050	QETB1VM-228N	2200MF	35V	ELECTRO	
	C051	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C051	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C051	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C051	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C051	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C051	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C052	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C052	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C052	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C052	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C052	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C052	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C053	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C053	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C053	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C053	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C053	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C053	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C056	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C056	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C056	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C056	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C056	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C056	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C057	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C057	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C057	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C057	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C057	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C057	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C058	QFLB2AJ-103	0.01MF	100V	MYLAR	A
	C058	QFLB2AJ-103	0.01MF	100V	MYLAR	B
	C058	QFLB2AJ-103	0.01MF	100V	MYLAR	C
	C058	QFLB2AJ-104	0.1MF	100V	MYLAR	D
	C058	QFLB2AJ-104	0.1MF	100V	MYLAR	EBS
	C058	QFLB2AJ-104	0.1MF	100V	MYLAR	F
	C059	EEW4205-688T	6800MF		ELECTRO	
	C060	EEW4205-688T	6800MF		ELECTRO	
	C061	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C063	QETB1CM-107	100MF	16V	ELECTRO	
	C064	QETB1CM-476	47MF	16V	ELECTRO	
	C067	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C069	QETB1EM-107	100MF	25V	ELECTRO	
	C070	QCHB1EZ-223	0.022MF	25V	CERAMIC	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C071	QETB1AM-476	47MF	10V	ELECTRO	
	C072	QETB1AM-476	47MF	10V	ELECTRO	
	C074	QEA40HZ-10AB			ELECTRO	
	C076	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C077	QETB1CM-476	47MF	16V	ELECTRO	
	C078	QETB1CM-476	47MF	16V	ELECTRO	
	C079	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C080	QETB1CM-476	47MF	16V	ELECTRO	
	C081	QETB1CM-476	47MF	16V	ELECTRO	
	C082	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C083	QETB1CM-476	47MF	16V	ELECTRO	
	C084	QETB1CM-476	47MF	16V	ELECTRO	
	C085	QETB1JM-227	220MF	63V	ELECTRO	
	C086	QETB1JM-227	220MF	63V	ELECTRO	
	C087	QCGB1HK-102	1000PF	50V	CERAMIC	
	C088	QETB1HM-226	22MF	50V	ELECTRO	
	C089	QETB1HM-226	22MF	50V	ELECTRO	
	C090	QETB1HM-475	4.7MF	50V	ELECTRO	
	C092	QETB1AM-476	47MF	10V	ELECTRO	
	C093	QETB1AM-476	47MF	10V	ELECTRO	
	C094	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C310	QCS21HJ-471	470PF	50V	CERAMIC	
	C321	QCS21HJ-101	100PF	50V	CERAMIC	
	C322	QCS21HJ-101	100PF	50V	CERAMIC	
	C325	QFLB1HJ-222	2200PF	50V	MYLAR	
	C326	QFLB1HJ-222	2200PF	50V	MYLAR	
	C327	QFLB1HJ-682	6800PF	50V	MYLAR	
	C328	QFLB1HJ-273	0.027MF	50V	MYLAR	
	C329	QFP81HJ-822	8200PF	50V	POLY	
	C331	QEK51HM-105G	1MF	50V	ELECTRO	
	C332	QEK51HM-105G	1MF	50V	ELECTRO	
	C333	QEK51CM-106G	10MF	16V	ELECTRO	
	C335	QCS21HJ-101	100PF	50V	CERAMIC	
	C336	QCS21HJ-101	100PF	50V	CERAMIC	
	C337	QCS21HJ-101	100PF	50V	CERAMIC	
	C338	QCS21HJ-101	100PF	50V	CERAMIC	
	C339	QCY21HK-152	1500PF	50V	CERAMIC	
	C340	QCY21HK-152	1500PF	50V	CERAMIC	
	C341	QCS21HJ-331	330PF	50V	CERAMIC	
	C342	QCS21HJ-331	330PF	50V	CERAMIC	
	C343	QCY21HK-122	1200PF	50V	CERAMIC	
	C344	QCY21HK-122	1200PF	50V	CERAMIC	
	C347	QETB1CM-107	100MF	16V	ELECTRO	
	C351	QCF21HP-473	0.047MF	50V	CERAMIC	
	C352	QCF21HP-473	0.047MF	50V	CERAMIC	
	C353	QEK51HM-105G	1MF	50V	ELECTRO	
	C354	QEK51HM-105G	1MF	50V	ELECTRO	
	C355	QEK51HM-105G	1MF	50V	ELECTRO	
	C356	QEK51HM-105G	1MF	50V	ELECTRO	
	C357	QETB1EM-106	10MF	25V	ELECTRO	
	C358	QETB1EM-106	10MF	25V	ELECTRO	
	C359	QEK51CM-106G	10MF	16V	ELECTRO	
	C361	QFLB1HJ-224	0.22MF	50V	MYLAR	
	C362	QFLB1HJ-224	0.22MF	50V	MYLAR	
	C363	QETB1HM-475	4.7MF	50V	ELECTRO	
	C364	QETB1CM-107	100MF	16V	ELECTRO	
	C365	QETB1HM-475	4.7MF	50V	ELECTRO	
	C366	QETB1AM-107	100MF	10V	ELECTRO	
	C371	QEK51HM-105G	1MF	50V	ELECTRO	
	C372	QEK51HM-105G	1MF	50V	ELECTRO	
	C373	QCSB1HJ-220	22PF	50V	CERAMIC	
	C374	QCSB1HJ-220	22PF	50V	CERAMIC	
	C383	QCBB1HK-101	100PF	50V	CERAMIC	
	C384	QCBB1HK-101	100PF	50V	CERAMIC	
	C389	QCF21HP-223	0.022MF	50V	CERAMIC	
	C390	QCF21HP-223	0.022MF	50V	CERAMIC	
	C391	QEK51CM-106G	10MF	16V	ELECTRO	
	C392	QEK51CM-106G	10MF	16V	ELECTRO	
	C393	QETB1CM-107	100MF	16V	ELECTRO	
	C394	QETB1CM-107	100MF	16V	ELECTRO	
	C395	QETB1HM-105	1MF	50V	ELECTRO	
	C396	QETB1CM-476	47MF	16V	ELECTRO	
	C401	QCF21HP-473	0.047MF	50V	CERAMIC	
	C402	QCF21HP-473	0.047MF	50V	CERAMIC	
	C405	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C406	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C407	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C408	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C411	QEK51CM-106G	10MF	16V	ELECTRO	
	C412	QEK51CM-106G	10MF	16V	ELECTRO	
	C413	QCS21HJ-271	270PF	50V	CERAMIC	
	C414	QCS21HJ-271	270PF	50V	CERAMIC	
	C415	QFLB1HJ-682	6800PF	50V	MYLAR	
	C416	QFLB1HJ-682	6800PF	50V	MYLAR	
	C417	QFLB1HJ-562	5600PF	50V	MYLAR	
	C418	QFLB1HJ-562	5600PF	50V	MYLAR	
	C421	QFLB1HJ-332	3300PF	50V	MYLAR	
	C422	QFLB1HJ-332	3300PF	50V	MYLAR	
	C441	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C442	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C443	QFLB1HJ-123	0.012MF	50V	MYLAR	
	C444	QFLB1HJ-123	0.012MF	50V	MYLAR	
	C445	QCS21HJ-470	47PF	50V	CERAMIC	
	C446	QCS21HJ-470	47PF	50V	CERAMIC	
	C451	QEK51HM-225G	2.2MF	50V	ELECTRO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C452	QEK51HM-225G	2.2MF	50V	ELECTRO	
	C453	QCBB1HK-101	100PF	50V	CERAMIC	
	C454	QCBB1HK-101	100PF	50V	CERAMIC	
	C455	QETB1AM-107	100MF	10V	ELECTRO	
	C456	QETB1AM-107	100MF	10V	ELECTRO	
	C457	QFLB1HJ-822	8200PF	50V	MYLAR	
	C458	QFLB1HJ-822	8200PF	50V	MYLAR	
	C459	QEK51HM-105G	1MF	50V	ELECTRO	
	C460	QEK51HM-105G	1MF	50V	ELECTRO	
	C461	QEK51CM-107	100MF	16V	ELECTRO	
	C462	QFLB1HJ-153	0.015MF	50V	MYLAR	
	C463	QETB1HM-106	10MF	50V	ELECTRO	
	C464	QETB1HM-106	10MF	50V	ELECTRO	
	C465	QFLB1HJ-153	0.015MF	50V	MYLAR	
	C475	QETB1AM-476	47MF	10V	ELECTRO	
	C679	QETB1HM-225	2.2MF	50V	ELECTRO	
	C680	QETB1HM-225	2.2MF	50V	ELECTRO	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	R	QRC128K-275EM	2.7M	1/2W	COMPOSI	A
	R001	QRD167J-392	3.9K	1/6W	CARBON	
	R002	QRD167J-392	3.9K	1/6W	CARBON	
	R003	QRD167J-104	100K	1/6W	CARBON	
	R004	QRD167J-104	100K	1/6W	CARBON	
⚠	R005	QRD14CJ-681S	680	1/4W	UNF.CARBON	
⚠	R006	QRD14CJ-681S	680	1/4W	UNF.CARBON	
	R007	QRD167J-471	470	1/6W	CARBON	
	R008	QRD167J-471	470	1/6W	CARBON	
	R009	QRD167J-104	100K	1/6W	CARBON	
	R010	QRD167J-104	100K	1/6W	CARBON	
	R011	QRD167J-122	1.2K	1/6W	CARBON	
	R012	QRD167J-122	1.2K	1/6W	CARBON	
	R013	QRD167J-122	1.2K	1/6W	CARBON	
	R014	QRD167J-122	1.2K	1/6W	CARBON	
⚠	R015	QRX012J-R22AM	0.22	1W	M.FILM	
⚠	R016	QRX012J-R22AM	0.22	1W	M.FILM	
⚠	R017	QRD14CJ-101S	100	1/4W	UNF.CARBON	A
⚠	R017	QRZ0077-101	100	1/4W	FUSIBLE	B
⚠	R017	QRZ0077-101	100	1/4W	FUSIBLE	C
⚠	R017	QRZ0077-101	100	1/4W	FUSIBLE	D
⚠	R017	QRZ0077-101	100	1/4W	FUSIBLE	EBS
⚠	R017	QRZ0077-101	100	1/4W	FUSIBLE	F
⚠	R018	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R018	QRZ0077-100	10	1/4W	FUSIBLE	B
⚠	R018	QRZ0077-100	10	1/4W	FUSIBLE	C
⚠	R018	QRZ0077-100	10	1/4W	FUSIBLE	D
⚠	R018	QRZ0077-100	10	1/4W	FUSIBLE	EBS
⚠	R018	QRZ0077-100	10	1/4W	FUSIBLE	F
⚠	R019	QRD14CJ-100S	10	1/4W	UNF.CARBON	
⚠	R020	QRD14CJ-100S	10	1/4W	UNF.CARBON	
⚠	R021	QRD14CJ-100S	10	1/4W	UNF.CARBON	
⚠	R022	QRD14CJ-100S	10	1/4W	UNF.CARBON	
	R023	QRD167J-823	82K	1/6W	CARBON	
	R024	QRD167J-104	100K	1/6W	CARBON	
	R025	QRD167J-562	5.6K	1/6W	CARBON	
	R026	QRD167J-333	33K	1/6W	CARBON	
	R027	QRD167J-562	5.6K	1/6W	CARBON	
	R029	QRD167J-104	100K	1/6W	CARBON	
	R030	QRD167J-471	470	1/6W	CARBON	
	R031	QRD167J-122	1.2K	1/6W	CARBON	
	R032	QRD167J-122	1.2K	1/6W	CARBON	
	R033	QRD167J-122	1.2K	1/6W	CARBON	
	R034	QRD167J-122	1.2K	1/6W	CARBON	
	R035	QRD167J-471	470	1/6W	CARBON	
⚠	R036	QRG012J-222AM	2.2K	1W	O.M.FILM	
⚠	R037	QRG012J-221AM	220	1W	O.M.FILM	
⚠	R038	QRG012J-221AM	220	1W	O.M.FILM	
	R039	QRD167J-103	10K	1/6W	CARBON	
	R040	QRD167J-103	10K	1/6W	CARBON	
⚠	R041	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R041	QRZ0077-100	10	1/4W	FUSIBLE	B
⚠	R041	QRZ0077-100	10	1/4W	FUSIBLE	C
⚠	R041	QRZ0077-100	10	1/4W	FUSIBLE	D
⚠	R041	QRZ0077-100	10	1/4W	FUSIBLE	EBS
⚠	R041	QRZ0077-100	10	1/4W	FUSIBLE	F
	R042	QRD167J-222	2.2K	1/6W	CARBON	
	R043	QRD167J-103	10K	1/6W	CARBON	
	R044	QRD167J-104	100K	1/6W	CARBON	
	R045	QRD167J-222	2.2K	1/6W	CARBON	
⚠	R046	QRG022J-391AM	390	2W	O.M.FILM	
⚠	R048	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R048	QRZ0077-100	10	1/4W	FUSIBLE	B
⚠	R048	QRZ0077-100	10	1/4W	FUSIBLE	C
⚠	R048	QRZ0077-100	10	1/4W	FUSIBLE	D
⚠	R048	QRZ0077-100	10	1/4W	FUSIBLE	EBS
⚠	R048	QRZ0077-100	10	1/4W	FUSIBLE	F
	R051	QRD167J-122	1.2K	1/6W	CARBON	
	R052	QRD167J-224	220K	1/6W	CARBON	

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R054	QRD167J-105	1M	1/6W	CARBON	
	R055	QRD167J-105	1M	1/6W	CARBON	
	R064	QRD167J-472	4.7K	1/6W	CARBON	
	R065	QRD167J-472	4.7K	1/6W	CARBON	
	R066	QRD167J-470	47	1/6W	CARBON	
	R067	QRD167J-182	1.8K	1/6W	CARBON	
⚠	R068	QRV144F-1501	1.5K	1/4W	M.FILM	
⚠	R069	QRV144F-1801	1.8K	1/4W	M.FILM	
⚠	R070	PTH61G30BD2R2N			FUSIBLE RE	SI
	R071	QRD167J-562	5.6K	1/6W	CARBON	
	R072	QRD167J-103	10K	1/6W	CARBON	
	R073	QRD167J-562	5.6K	1/6W	CARBON	
	R074	QRD167J-153	15K	1/6W	CARBON	
	R075	QRD167J-103	10K	1/6W	CARBON	
	R076	QRD167J-102	1K	1/6W	CARBON	
⚠	R077	QRG022J-271AM	270	2W	O.M.FILM	
	R078	QRD167J-472	4.7K	1/6W	CARBON	
	R079	QRD167J-103	10K	1/6W	CARBON	
⚠	R081	QRD14CJ-221S	220	1/4W	UNF.CARBON	
⚠	R082	QRD14CJ-221S	220	1/4W	UNF.CARBON	
	R085	QRD167J-562	5.6K	1/6W	CARBON	
	R087	QRD167J-103	10K	1/6W	CARBON	
	R088	QRD167J-471	470	1/6W	CARBON	
	R089	QRD167J-152	1.5K	1/6W	CARBON	
⚠	R091	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	A
⚠	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	B
⚠	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	C
⚠	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	D
⚠	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	EBS
⚠	R091	QRZ0077-4R7	4.7	1/4W	FUSIBLE	F
	R092	QRD167J-472	4.7K	1/6W	CARBON	
	R093	QRD167J-472	4.7K	1/6W	CARBON	
⚠	R094	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	A
⚠	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	B
⚠	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	C
⚠	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	D
⚠	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	EBS
⚠	R094	QRZ0077-4R7	4.7	1/4W	FUSIBLE	F
⚠	R095	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	A
⚠	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	B
⚠	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	C
⚠	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	D
⚠	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	EBS
⚠	R095	QRZ0077-4R7	4.7	1/4W	FUSIBLE	F
⚠	R096	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	A
⚠	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	B
⚠	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	C
⚠	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	D
⚠	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	EBS
⚠	R096	QRZ0077-4R7	4.7	1/4W	FUSIBLE	F
	R311	QRD167J-103	10K	1/6W	CARBON	
	R312	QRD167J-103	10K	1/6W	CARBON	
	R313	QRD167J-153	15K	1/6W	CARBON	
	R314	QRD167J-153	15K	1/6W	CARBON	
	R317	QRD167J-223	22K	1/6W	CARBON	
	R318	QRD167J-223	22K	1/6W	CARBON	
	R319	QRD167J-683	68K	1/6W	CARBON	
	R320	QRD167J-683	68K	1/6W	CARBON	
⚠	R321	QRD14CJ-220S	22	1/4W	UNF.CARBON	A
⚠	R321	QRZ0077-220	22	1/4W	FUSIBLE	B
⚠	R321	QRZ0077-220	22	1/4W	FUSIBLE	C
⚠	R321	QRZ0077-220	22	1/4W	FUSIBLE	D
⚠	R321	QRZ0077-220	22	1/4W	FUSIBLE	EBS
⚠	R321	QRZ0077-220	22	1/4W	FUSIBLE	F
	R327	QRD167J-473	47K	1/6W	CARBON	
	R328	QRD167J-473	47K	1/6W	CARBON	
	R330	QRD167J-181	180	1/6W	CARBON	
	R331	QRD167J-201	200	1/6W	CARBON	
	R332	QRD167J-332	3.3K	1/6W	CARBON	
	R333	QRD167J-104	100K	1/6W	CARBON	
⚠	R336	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R336	QRZ0077-100	10	1/4W	FUSIBLE	B
⚠	R336	QRZ0077-100	10	1/4W	FUSIBLE	C
⚠	R336	QRZ0077-100	10	1/4W	FUSIBLE	D
⚠	R336	QRZ0077-100	10	1/4W	FUSIBLE	EBS
⚠	R336	QRZ0077-100	10	1/4W	FUSIBLE	F
	R339	QRD167J-563	56K	1/6W	CARBON	
	R340	QRD167J-563	56K	1/6W	CARBON	
	R341	QRD167J-100	10	1/6W	CARBON	
	R342	QRD167J-100	10	1/6W	CARBON	
	R343	QRD167J-222	2.2K	1/6W	CARBON	
⚠	R344	QRD14CJ-5R6S	5.6	1/4W	UNF.CARBON	
	R347	QRD167J-224	220K	1/6W	CARBON	
	R348	QRD167J-224	220K	1/6W	CARBON	
	R349	QRD167J-223	22K	1/6W	CARBON	
	R350	QRD167J-222	2.2K	1/6W	CARBON	
	R351	QRD167J-222	2.2K	1/6W	CARBON	
	R353	QRD167J-153	15K	1/6W	CARBON	
	R354	QRD167J-153	15K	1/6W	CARBON	
	R355	QRD167J-273	27K	1/6W	CARBON	
	R356	QRD167J-273	27K	1/6W	CARBON	
	R357	QRD167J-332	3.3K	1/6W	CARBON	
	R358	QRD167J-332	3.3K	1/6W	CARBON	
	R359	QRD167J-223	22K	1/6W	CARBON	
	R360	QRD167J-223	22K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R361	QRD167J-561	560 1/6W CARBON	
	R362	QRD167J-561	560 1/6W CARBON	
	R363	QRD167J-222	2.2K 1/6W CARBON	
	R364	QRD167J-222	2.2K 1/6W CARBON	
	R365	QRD167J-103	10K 1/6W CARBON	
	R366	QRD167J-105	1M 1/6W CARBON	
	R369	QRD167J-102	1K 1/6W CARBON	
	R370	QRD167J-102	1K 1/6W CARBON	
	R371	QRD167J-562	5.6K 1/6W CARBON	
	R372	QRD167J-562	5.6K 1/6W CARBON	
	R373	QRD167J-103	10K 1/6W CARBON	
	R374	QRD167J-103	10K 1/6W CARBON	
	R375	QRD167J-223	22K 1/6W CARBON	
	R376	QRD167J-223	22K 1/6W CARBON	
	R377	QRD167J-103	10K 1/6W CARBON	
	R378	QRD167J-103	10K 1/6W CARBON	
	R379	QRD167J-103	10K 1/6W CARBON	
	R380	QRD167J-103	10K 1/6W CARBON	
	R381	QRD167J-102	1K 1/6W CARBON	
	R382	QRD167J-102	1K 1/6W CARBON	
	R383	QRD167J-104	100K 1/6W CARBON	
	R384	QRD167J-104	100K 1/6W CARBON	
	R385	QRD167J-682	6.8K 1/6W CARBON	
	R386	QRD167J-682	6.8K 1/6W CARBON	
	R387	QRD167J-104	100K 1/6W CARBON	
	R388	QRD167J-104	100K 1/6W CARBON	
	R389	QRD167J-221	220 1/6W CARBON	
	R390	QRD167J-221	220 1/6W CARBON	
	R391	QRD167J-822	8.2K 1/6W CARBON	
	R392	QRD167J-822	8.2K 1/6W CARBON	
	R393	QRD167J-562	5.6K 1/6W CARBON	
	R394	QRD167J-562	5.6K 1/6W CARBON	
	R395	QRD167J-103	10K 1/6W CARBON	
	R396	QRD167J-103	10K 1/6W CARBON	
	R397	QRD167J-102	1K 1/6W CARBON	
	R398	QRD167J-223	22K 1/6W CARBON	
	R399	QRD167J-223	22K 1/6W CARBON	
	R400	QRD167J-223	22K 1/6W CARBON	
	R401	QRD167J-333	33K 1/6W CARBON	
	R402	QRD167J-333	33K 1/6W CARBON	
	R403	QRD167J-302	3K 1/6W CARBON	
	R404	QRD167J-302	3K 1/6W CARBON	
	R405	QRD167J-683	68K 1/6W CARBON	
	R406	QRD167J-683	68K 1/6W CARBON	
	R407	QRD167J-153	15K 1/6W CARBON	
	R408	QRD167J-153	15K 1/6W CARBON	
	R409	QRD167J-153	15K 1/6W CARBON	
	R410	QRD167J-153	15K 1/6W CARBON	
	R411	QRD167J-332	3.3K 1/6W CARBON	
	R412	QRD167J-332	3.3K 1/6W CARBON	
	R413	QRD167J-182	1.8K 1/6W CARBON	
	R414	QRD167J-182	1.8K 1/6W CARBON	
	R415	QRD167J-511	510 1/6W CARBON	
	R416	QRD167J-511	510 1/6W CARBON	
	R417	QRD167J-301	300 1/6W CARBON	
	R418	QRD167J-301	300 1/6W CARBON	
	R423	QRD167J-122	1.2K 1/6W CARBON	
	R424	QRD167J-122	1.2K 1/6W CARBON	
	R425	QRD167J-221	220 1/6W CARBON	
	R426	QRD167J-221	220 1/6W CARBON	
	R431	QRD167J-474	470K 1/6W CARBON	
	R432	QRD167J-474	470K 1/6W CARBON	
	R433	QRD167J-221	220 1/6W CARBON	
	R434	QRD167J-221	220 1/6W CARBON	
	R439	QRD167J-103	10K 1/6W CARBON	
	R440	QRD167J-223	22K 1/6W CARBON	
	R441	QRD167J-681	680 1/6W CARBON	
	R442	QRD167J-681	680 1/6W CARBON	
	R443	QRD167J-183	18K 1/6W CARBON	
	R445	QRD167J-224	220K 1/6W CARBON	
	R446	QRD167J-103	10K 1/6W CARBON	
	R447	QRD167J-103	10K 1/6W CARBON	
	R448	QRD167J-223	22K 1/6W CARBON	
	R453	QRD167J-470	47 1/6W CARBON	
	R454	QRD167J-470	47 1/6W CARBON	
	R455	QRD167J-334	330K 1/6W CARBON	
	R456	QRD167J-334	330K 1/6W CARBON	
	R457	QRD167J-432	4.3K 1/6W CARBON	
	R458	QRD167J-432	4.3K 1/6W CARBON	
	R459	QRD167J-302	3K 1/6W CARBON	
	R460	QRD167J-302	3K 1/6W CARBON	
	R461	QRD167J-512	5.1K 1/6W CARBON	
	R462	QRD167J-512	5.1K 1/6W CARBON	
	R463	QRD167J-752	7.5K 1/6W CARBON	
	R464	QRD167J-752	7.5K 1/6W CARBON	
	R465	QRD167J-223	22K 1/6W CARBON	
	R466	QRD167J-223	22K 1/6W CARBON	
	R467	QRD167J-105	1M 1/6W CARBON	
	R468	QRD167J-105	1M 1/6W CARBON	
	R469	QRD167J-105	1M 1/6W CARBON	
	R470	QRD167J-105	1M 1/6W CARBON	
	R471	QRD167J-471	470 1/6W CARBON	
	R472	QRD167J-472	4.7K 1/6W CARBON	
	R473	QRD167J-472	4.7K 1/6W CARBON	
	R474	QRD167J-274	270K 1/6W CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R475	QRD167J-104	100K 1/6W CARBON	
	R478	QRD167J-223	22K 1/6W CARBON	
	R479	QRD167J-223	22K 1/6W CARBON	
	R480	QRD167J-102	1K 1/6W CARBON	
	R481	QRD167J-102	1K 1/6W CARBON	
⚠	R999	QRG022J-102AM	1K 2W O.M.FILM	
	VR311	QVPA601-503A	50K VARIABLE	
	VR312	QVPA601-503A	50K VARIABLE	
	VR331	QVPA601-204A	200K VARIABLE	
	VR332	QVPA601-204A	200K VARIABLE	
	VR451	QVPA601-201A	200 VARIABLE	
	VR452	QVPA601-201A	200 VARIABLE	
	VR453	QVPA601-201A	200 VARIABLE	
	VR454	QVPA601-201A	200 VARIABLE	
	VR455	QVPA601-103A	10K VARIABLE	
	VR456	QVPA601-103A	10K VARIABLE	
	VR457	QVPA601-103A	10K VARIABLE	
	VR458	QVPA601-103A	10K VARIABLE	

⚠ : SAFETY PARTS

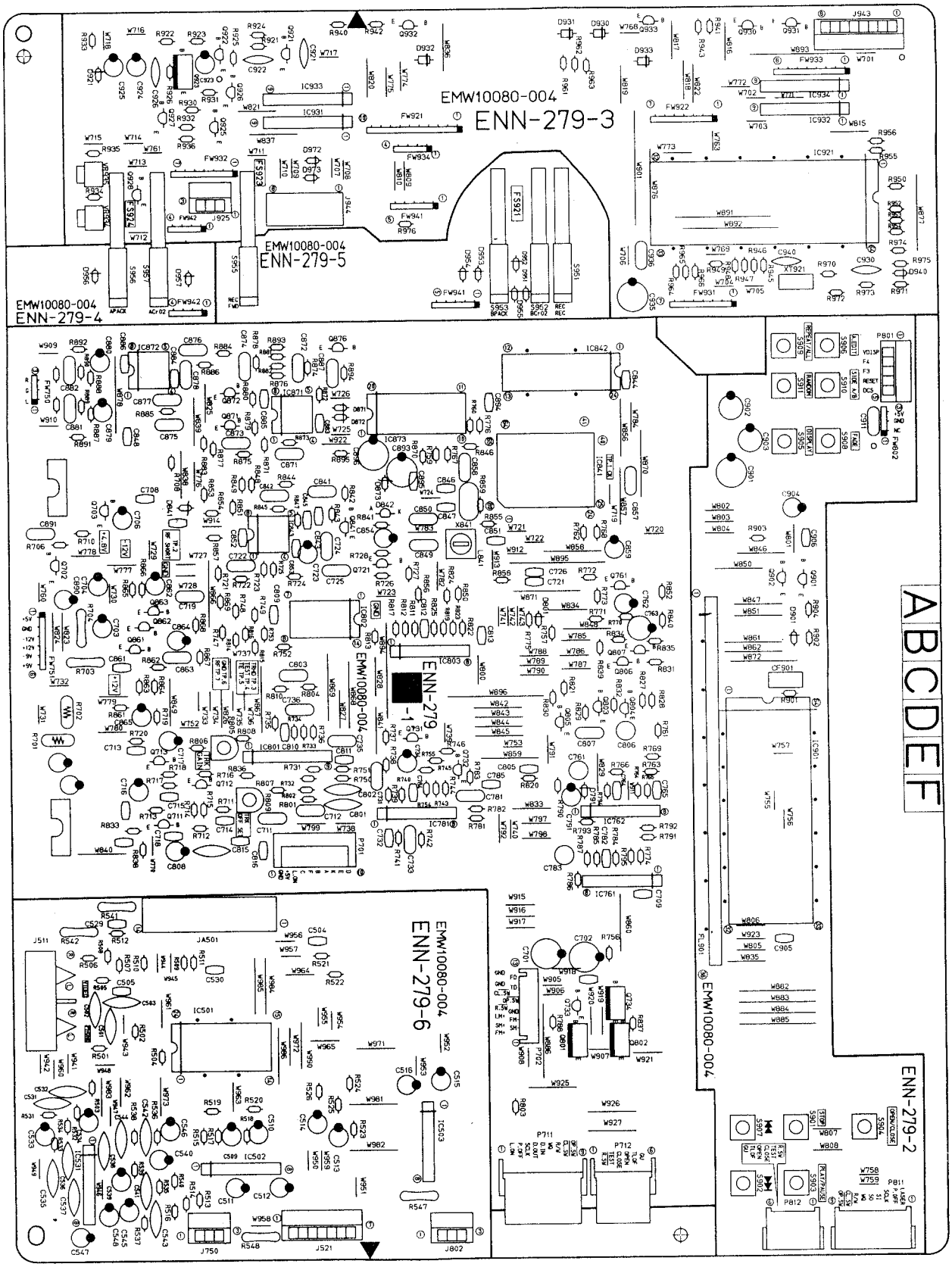
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		QWE350-10DD	WIRE	
		QWE370-04BB	WIRE	
		EMW10078-102	PRINTED BOARD	A
		EMW10078-004	PRINTED BOARD	B
		EMW10078-201	PRINTED BOARD	C
		EMW10078-201	PRINTED BOARD	D
		EMW10078-201BS	PRINTED BOARD	EBS
		EMW10078-201	PRINTED BOARD	F
	J001	EMB90YV-401A	SPEAKER TERMINAL	
	J011	VMC0107-R06	CONNECTOR(6PIN)	
	J015	VMC0107-005	CONNECT TERMINAL(5PIN)	
	J017	QMS3L10-EDOH	MINI JACK	
	J751	VMC0107-006	CONNECT TERMINAL(6PIN)	
	J901	EMV5133-003K	PLUG ASSY(3PIN)	
	J921	VMC0107-010	WIRE CONNECTOR(10PIN)	
	J922	VMC0107-007	CONNECT TERMINAL(7PIN).	
	L001	EQL0001-R45	INDUCTOR	
	L002	EQL0001-R45	INDUCTOR	
	L321	EQL2106-223	INDUCTOR	
	L322	EQL2106-223	INDUCTOR	
	L331	ENZ6002-010	OSCILLATOR COIL	
	L333	EQL2106-223	INDUCTOR	
	L334	EQL2106-223	INDUCTOR	
	L401	EQL2106-562	INDUCTOR	
	L402	EQL2106-562	INDUCTOR	
	P001	QMCB001-E03H	AC INLET	A
	P001	QMCB001-E02H	AC SOCKET	B
	P001	QMCB001-E02H	AC SOCKET	C
	P001	QMCB001-E02H	AC SOCKET	D
	P001	QMCB001-E02HBS	AC SOCKET	EBS
	P001	QMCB001-E02H	AC SOCKET	F
	P331	QMV5011-007K	PLUG ASSY(7PIN)	
	P333	QMV5011-003K	PLUG ASSY(3PIN)	
	S310	QSS7A12-E01	SLIDE SWITCH	
	BC901	EWS243-035T	SOCKET WIRE(4PIN)	
	EP001	E70225-002	EARTH PLATE	
	EP002	E70225-002	EARTH PLATE	
	EP005	E70859-001	EARTH PLATE	D
	EP005	E70859-001	EARTH PLATE	EBS
	EP005	E70859-001	EARTH PLATE	F
	EP006	E70859-001	EARTH PLATE	
	EP011	E406519-221	P.W.BOARD BRACKET	
	FT001	VMZ0087-001	FUSE CLIP	
	FT002	VMZ0087-001	FUSE CLIP	
	FT003	VMZ0087-001	FUSE CLIP	B
	FT004	VMZ0087-001	FUSE CLIP	B
	FT101	VMZ0087-001	FUSE CLIP	
	FT102	VMZ0087-001	FUSE CLIP	
	FT103	VMZ0087-001	FUSE CLIP	
	FT104	VMZ0087-001	FUSE CLIP	
	FW011	EWR36B-20LST	FLAT WIRE(6PIN)	
	FW015	EWR35B-35LST	FLAT WIRE(5PIN)	
	FW021	EWR23C-35LN	FLAT WIRE(3PIN)	
	JA103	EMV5125-005	PLUG ASSY(5PIN)	
	JB201	VMC0193-S10	CONNECT TERMINAL(10PIN)	
	JB202	VMC0193-S10	CONNECT TERMINAL(10PIN)	
	JB203	VMC0193-S06	CONNECT TERMINAL(6PIN)	
	JB501	EMV5125-014	PLUG ASSY(14PIN)	
⚠	RS001	QSR0085-018	VOLTAGE SELECTOR	B
	RY001	ESK8D24-212	RELAY	
	RY002	ESK1D12-211M	RELAY	

⚠ : SAFETY PARTS

■ENN-279 ☐ CD PC Board Ass'y

Note : ENN-279 ☐ varies according to the areas employed. See note (1) when placing an order.



Note(1)

PC Board Ass'y	Designated Areas
ENN-279 [A]	the U.S.A., Canada
ENN-279 [B]	Australia, Universal Type
ENN-279 [C]	the U.K., Continental Europe, East Europe, Poland, Soviet Union and Rumania
ENN-279 [D]	Germany, Italy

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q702	2SA934(Q,R)	SILICON	ROHM	
	Q703	DTA114YS	SILICON	ROHM	
	Q711	2SC535(B,C)	SILICON	HITACHI	
	Q712	2SC1740S(R,S)	SILICON	ROHM	
	Q713	2SA933S(R,S)	SILICON	ROHM	
	Q721	2SD2144S(VW)	SILICON	ROHM	
	Q731	2SD2144S(VW)	SILICON	ROHM	
	Q732	2SA933S(R,S)	SILICON	ROHM	
	Q733	2SC2060(Q,R)	SILICON	ROHM	
	Q734	2SB1357(E,F)	SILICON	ROHM	
	Q761	2SD2144S(VW)	SILICON	ROHM	
	Q801	2SD2037(E,F)	SILICON	ROHM	
	Q802	2SB1357(E,F)	SILICON	ROHM	
	Q803	2SD2144S(VW)	SILICON	ROHM	
	Q804	2SD2144S(VW)	SILICON	ROHM	
	Q805	2SD2144S(VW)	SILICON	ROHM	
	Q806	2SA933S(R,S)	SILICON	ROHM	
	Q807	2SC1740S(R,S)	SILICON	ROHM	
	Q841	2SD2144S(VW)	SILICON	ROHM	
	Q861	2SA933S(R,S)	SILICON	ROHM	
	Q862	2SC1740S(R,S)	SILICON	ROHM	
	Q863	2SC1740S(R,S)	SILICON	ROHM	
	Q871	2SD2144S(VW)	SILICON	ROHM	
	Q872	2SD2144S(VW)	SILICON	ROHM	
	Q876	DTA114YS	SILICON	ROHM	
	Q901	DTA114YS	SILICON	ROHM	
	Q902	DTC114YS	SILICON	ROHM	
	Q921	2SC1740S(R,S)	SILICON	ROHM	
	Q922	2SC1740S(R,S)	SILICON	ROHM	
	Q923	2SD2037(E,F)	SILICON	ROHM	
	Q925	DTC114YS	SILICON	ROHM	
	Q926	DTC114YS	SILICON	ROHM	
	Q927	2SA933S(R,S)	SILICON	ROHM	
	Q928	2SA933S(R,S)	SILICON	ROHM	
	Q930	DTC144ES	SILICON	ROHM	
	Q931	DTC144ES	SILICON	ROHM	
	Q932	2SA934(Q,R)	SILICON	ROHM	
	Q933	2SA934(Q,R)	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC501	TC9164N	I.C.	TOSHIBA	
	IC502	BA15218N	I.C.	ROHM	
	IC503	BA15218N	I.C.	ROHM	
	IC531	VC4580LD	I.C.	DAINICHI	
	IC761	STA341M(A)	I.C.	SANKEN	
	IC762	VC4580L	I.C.	DAINICHI	
	IC781	BA15218N	I.C.	ROHM	
	IC801	NJM072S	I.C.	DAINICHI	
	IC802	BA10339	I.C.	ROHM	
	IC803	BA15218N	I.C.	ROHM	
	IC841	YM3805-H	I.C.	YAMAHA	
	IC842	LC3517BS-15	I.C.	SANYO	
	IC843	M5209P	I.C.	MITSUBISHI	
	IC871	VC4580D	I.C.	DAINICHI	
	IC872	VC4580D	I.C.	DAINICHI	
	IC873	LC7881-C	I.C.	SANYO	
	IC901	HD404019RB14S	I.C.	HITACHI	
	IC921	HD614081SC34	I.C.	HITACHI	
	IC931	BA6218	I.C.	ROHM	
	IC932	BA6218	I.C.	ROHM	
	IC933	BA6218	I.C.	ROHM	
	IC934	BA6218	I.C.	ROHM	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D791	1SS133	SILICON	ROHM	
	D801	1SS133	SILICON	ROHM	
	D841	MTZ5.1JB	ZENER	ROHM	
	D842	SVC321-AW	VARICAP	SANYO	
	D871	1SS133	SILICON	ROHM	
	D872	1SS133	SILICON	ROHM	
	D873	MTZ5.1JB	ZENER	ROHM	
	D901	1SS133	SILICON	ROHM	
	D921	MTZ6.2JC	ZENER	ROHM	
	D932	1SR139-200	SILICON	ROHM	
	D933	1SR139-200	SILICON	ROHM	
	D940	1SS133	SILICON	ROHM	
	D951	1SS133	SILICON	ROHM	
	D952	1SS133	SILICON	ROHM	
	D953	1SS133	SILICON	ROHM	
	D954	1SS133	SILICON	ROHM	
	D955	1SS133	SILICON	ROHM	
	D956	1SS133	SILICON	ROHM	
	D957	1SS133	SILICON	ROHM	
	D972	1SS133	SILICON	ROHM	
	D973	1SS133	SILICON	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C501	QCS21HJ-101	100PF	50V	CERAMIC	A
	C501	QCS21HJ-101	100PF	50V	CERAMIC	B
	C501	QCS21HJ-331	330PF	50V	CERAMIC	C
	C501	QCS21HJ-331	330PF	50V	CERAMIC	D
	C502	QCS21HJ-101	100PF	50V	CERAMIC	A
	C502	QCS21HJ-101	100PF	50V	CERAMIC	B
	C502	QCS21HJ-331	330PF	50V	CERAMIC	C
	C502	QCS21HJ-331	330PF	50V	CERAMIC	D
	C503	QCF21HP-473	0.047MF	50V	CERAMIC	
	C504	QCBB1HK-561	560PF	50V	CERAMIC	
	C505	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C509	QETB1HM-475	4.7MF	50V	ELECTRO	
	C510	QETB1HM-475	4.7MF	50V	ELECTRO	
	C511	QETB1HM-475	4.7MF	50V	ELECTRO	
	C512	QETB1HM-475	4.7MF	50V	ELECTRO	
	C513	QETB1HM-475	4.7MF	50V	ELECTRO	
	C514	QETB1HM-475	4.7MF	50V	ELECTRO	
	C515	QETB1HM-475	4.7MF	50V	ELECTRO	
	C516	QETB1HM-475	4.7MF	50V	ELECTRO	
	C531	QCS21HJ-101	100PF	50V	CERAMIC	A
	C531	QCS21HJ-101	100PF	50V	CERAMIC	B
	C531	QCS21HJ-271	270PF	50V	CERAMIC	C
	C531	QCS21HJ-271	270PF	50V	CERAMIC	D
	C532	QCS21HJ-101	100PF	50V	CERAMIC	A
	C532	QCS21HJ-101	100PF	50V	CERAMIC	B
	C532	QCS21HJ-271	270PF	50V	CERAMIC	C
	C532	QCS21HJ-271	270PF	50V	CERAMIC	D
	C533	QETB1HM-225	2.2MF	50V	ELECTRO	
	C534	QETB1HM-225	2.2MF	50V	ELECTRO	
	C535	QCF21HP-473	0.047MF	50V	CERAMIC	
	C536	QCF21HP-473	0.047MF	50V	CERAMIC	
	C537	QCS21HJ-101	100PF	50V	CERAMIC	
	C538	QCS21HJ-101	100PF	50V	CERAMIC	
	C539	QETB1EM-226	22MF	25V	ELECTRO	
	C540	QETB1EM-226	22MF	25V	ELECTRO	
	C541	QCY21HK-682	6800PF	50V	CERAMIC	
	C542	QCY21HK-682	6800PF	50V	CERAMIC	
	C543	QCY21HK-182	1800PF	50V	CERAMIC	
	C544	QCY21HK-182	1800PF	50V	CERAMIC	
	C545	QETB1HM-225	2.2MF	50V	ELECTRO	
	C546	QETB1HM-225	2.2MF	50V	ELECTRO	
	C547	QETB1CM-476	47MF	16V	ELECTRO	
	C548	QETB1CM-476	47MF	16V	ELECTRO	
	C701	QETB1AM-477	470MF	10V	ELECTRO	
	C702	QETB1AM-477	470MF	10V	ELECTRO	
	C703	QETB1CM-476	47MF	16V	ELECTRO	
	C704	QETB1CM-476	47MF	16V	ELECTRO	
	C706	QETB1AM-107	100MF	10V	ELECTRO	
	C708	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C709	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C711	QFLB1HJ-472	4700PF	50V	MYLAR	
	C712	QFLB1HJ-472	4700PF	50V	MYLAR	
	C713	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C714	QCSB1HK-3R9	3.9PF	50V	CERAMIC	
	C715	QCBB1HK-471	470PF	50V	CERAMIC	
	C716	QETB1EM-106	10MF	25V	ELECTRO	
	C717	QETB1CM-476	47MF	16V	ELECTRO	
	C718	QCSB1HJ-680	68PF	50V	CERAMIC	
	C719	QFLB1HJ-154	0.15MF	50V	MYLAR	
	C721	QCSB1HJ-470	47PF	50V	CERAMIC	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C722	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C723	QETB1EM-106	10MF	25V	ELECTRO	
	C724	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C725	QFV81HJ-474	0.47MF	50V	T.FILM	
	C726	QCSB1HJ-180	18PF	50V	CERAMIC	
	C731	QFLB1HJ-183	0.018MF	50V	MYLAR	
	C732	QCBB1HK-271	270PF	50V	CERAMIC	
	C733	QFLB1HJ-393	0.039MF	50V	MYLAR	
	C734	QETB1CM-226	22MF	16V	ELECTRO	
	C735	QFLB1HJ-104	0.1MF	50V	MYLAR	
	C736	QFLB1HJ-224	0.22MF	50V	MYLAR	
	C761	QEN51HM-225	2.2MF	50V	NON POLE	
	C762	QETB1CM-226	22MF	16V	ELECTRO	
	C763	QETB0JM-227	220MF	6.3V	ELECTRO	
	C764	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C765	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C781	QFLB1HJ-272	2700PF	50V	MYLAR	
	C782	QCBB1HK-101	100PF	50V	CERAMIC	
	C783	QEN51HM-225	2.2MF	50V	NON POLE	
	C784	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C785	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C791	QETB1HM-475	4.7MF	50V	ELECTRO	
	C801	QCT26CH-151	150PF	50V	CERAMIC	
	C802	QCT26CH-121	120PF	50V	CERAMIC	
	C803	QFLB1HJ-223	0.022MF	50V	MYLAR	
	C805	QCSB1HJ-470	47PF	50V	CERAMIC	
	C806	QEN51HM-225	2.2MF	50V	NON POLE	
	C807	QFLB1HJ-563	0.056MF	50V	MYLAR	
	C808	QETB1CM-476	47MF	16V	ELECTRO	
	C809	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C810	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C811	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C812	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C813	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C815	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C816	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C841	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C842	QFV81HJ-474	0.47MF	50V	T.FILM	
	C843	QCGB1HK-102	1000PF	50V	CERAMIC	
	C844	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C845	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C846	QCSB1HJ-100	10PF	50V	CERAMIC	
	C847	QCSB1HJ-100	10PF	50V	CERAMIC	
	C848	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C849	QFP81HJ-151	150PF	50V	POLY	
	C850	QFP81HJ-471	470PF	50V	POLY	
	C851	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C852	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C853	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C854	QETB1HM-474	0.47MF	50V	ELECTRO	
	C857	QFLB1HJ-124	0.12MF	50V	MYLAR	
	C858	QCZ0202-155	1.5MF	25V	CERAMIC	
	C859	QETB1AM-107	100MF	10V	ELECTRO	
	C861	QCBB1HK-101	100PF	50V	CERAMIC	
	C862	QETB1CM-107	100MF	16V	ELECTRO	
	C863	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C864	QETB1EM-106	10MF	25V	ELECTRO	
	C865	QETB1HM-105	1MF	50V	ELECTRO	
	C871	QFLB1HJ-392	3900PF	50V	MYLAR	
	C872	QFLB1HJ-392	3900PF	50V	MYLAR	
	C873	QFLB1HJ-683	0.068MF	50V	MYLAR	
	C874	QFLB1HJ-683	0.068MF	50V	MYLAR	
	C875	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C876	QFLB1HJ-103	0.01MF	50V	MYLAR	
	C877	QFLB1HJ-222	2200PF	50V	MYLAR	
	C878	QFLB1HJ-222	2200PF	50V	MYLAR	
	C879	QEK51EM-476	47MF	25V	ELECTRO	
	C880	QEK51EM-476	47MF	25V	ELECTRO	
	C881	QFLB1HJ-562	5600PF	50V	MYLAR	
	C882	QFLB1HJ-562	5600PF	50V	MYLAR	
	C883	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C884	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C885	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C886	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C887	QFLB1HJ-102	1000PF	50V	MYLAR	
	C890	QETB1AM-107	100MF	10V	ELECTRO	
	C891	QCZ0202-155	1.5MF	25V	CERAMIC	
	C893	EEZ2505-107	100MF		ELECTRO	
	C894	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C895	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C896	EEZ2505-107	100MF		ELECTRO	
	C901	QER61HM-226	22MF	50V	ELECTRO	
	C902	QEK51HM-475	4.7MF	50V	ELECTRO	
	C903	QEK51HM-475	4.7MF	50V	ELECTRO	
	C904	QETB1AM-107	100MF	10V	ELECTRO	
	C905	QCZ0202-155	1.5MF	25V	CERAMIC	
	C906	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C911	QCZ0202-155	1.5MF	25V	CERAMIC	
	C921	QCF21HP-223	0.022MF	50V	CERAMIC	
	C922	QCF21HP-223	0.022MF	50V	CERAMIC	
	C923	QETB1HM-105	1MF	50V	ELECTRO	
	C924	QETB1AM-476	47MF	10V	ELECTRO	
	C925	QETB1AM-476	47MF	10V	ELECTRO	
	C926	QCF21HP-103	0.01MF	50V	CERAMIC	
	C930	QCF21HP-473	0.047MF	50V	CERAMIC	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C935	QETB1AM-476	47MF	10V	ELECTRO	
	C936	QCZ0202-155	1.5MF	25V	CERAMIC	
	C940	QCF21HP-103	0.01MF	50V	CERAMIC	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R501	QRD167J-272	2.7K	1/6W	CARBON	
	R502	QRD167J-272	2.7K	1/6W	CARBON	
	R503	QRD167J-104	100K	1/6W	CARBON	
	R504	QRD167J-104	100K	1/6W	CARBON	
	R505	QRD167J-183	18K	1/6W	CARBON	
	R506	QRD167J-183	18K	1/6W	CARBON	
	R507	QRD167J-683	68K	1/6W	CARBON	
	R508	QRD167J-683	68K	1/6W	CARBON	
	R509	QRD167J-222	2.2K	1/6W	CARBON	
	R510	QRD167J-222	2.2K	1/6W	CARBON	
	R511	QRD167J-104	100K	1/6W	CARBON	
	R512	QRD167J-104	100K	1/6W	CARBON	
	R513	QRD167J-332	3.3K	1/6W	CARBON	
	R514	QRD167J-332	3.3K	1/6W	CARBON	
	R515	QRD167J-682	6.8K	1/6W	CARBON	
	R516	QRD167J-682	6.8K	1/6W	CARBON	
	R517	QRD167J-104	100K	1/6W	CARBON	
	R518	QRD167J-104	100K	1/6W	CARBON	
	R519	QRD167J-104	100K	1/6W	CARBON	
	R520	QRD167J-104	100K	1/6W	CARBON	
	R521	QRD167J-223	22K	1/6W	CARBON	
	R522	QRD167J-223	22K	1/6W	CARBON	
	R523	QRD167J-104	100K	1/6W	CARBON	
	R524	QRD167J-104	100K	1/6W	CARBON	
	R525	QRD167J-104	100K	1/6W	CARBON	
	R526	QRD167J-104	100K	1/6W	CARBON	
	R531	QRD167J-104	100K	1/6W	CARBON	
	R532	QRD167J-104	100K	1/6W	CARBON	
	R533	QRD167J-104	100K	1/6W	CARBON	
	R534	QRD167J-104	100K	1/6W	CARBON	
	R535	QRD167J-474	470K	1/6W	CARBON	
	R536	QRD167J-474	470K	1/6W	CARBON	
	R537	QRD167J-393	39K	1/6W	CARBON	
	R538	QRD167J-393	39K	1/6W	CARBON	
	R539	QRD167J-911	910	1/6W	CARBON	
	R540	QRD167J-911	910	1/6W	CARBON	
⚠	R541	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R541	QRZ0077-100	10	1/4W	FUSIBLE	B
⚠	R541	QRZ0077-100	10	1/4W	FUSIBLE	C
⚠	R541	QRZ0077-100	10	1/4W	FUSIBLE	D
⚠	R542	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R542	QRZ0077-100	10	1/4W	FUSIBLE	B
⚠	R542	QRZ0077-100	10	1/4W	FUSIBLE	C
⚠	R542	QRZ0077-100	10	1/4W	FUSIBLE	D
⚠	R547	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R548	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R701	PTH61G25AR4R7M			FUSIBLE RE	SI
⚠	R702	PTH61G25AR4R7M			FUSIBLE RE	SI
⚠	R703	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R703	QRZ0077-100	10	1/4W	FUSIBLE	B
⚠	R703	QRZ0077-100	10	1/4W	FUSIBLE	C
⚠	R703	QRZ0077-100	10	1/4W	FUSIBLE	D
⚠	R704	QRD14CJ-100S	10	1/4W	UNF.CARBON	A
⚠	R704	QRZ0077-100	10	1/4W	FUSIBLE	B
⚠	R704	QRZ0077-100	10	1/4W	FUSIBLE	C
⚠	R704	QRZ0077-100	10	1/4W	FUSIBLE	D
	R706	QRD167J-472	4.7K	1/6W	CARBON	
	R708	QRD167J-472	4.7K	1/6W	CARBON	
	R710	QRD167J-122	1.2K	1/6W	CARBON	
	R711	QRD167J-183	18K	1/6W	CARBON	
	R712	QRD167J-432	4.3K	1/6W	CARBON	
	R713	QRD167J-391	390	1/6W	CARBON	
	R714	QRD167J-221	220	1/6W	CARBON	
	R715	QRD167J-152	1.5K	1/6W	CARBON	
	R716	QRD167J-561	560	1/6W	CARBON	
	R717	QRD167J-561	560	1/6W	CARBON	
	R718	QRD167J-562	5.6K	1/6W	CARBON	
	R719	QRD167J-152	1.5K	1/6W	CARBON	
	R720	QRD167J-271	270	1/6W	CARBON	
	R721	QRD167J-471	470	1/6W	CARBON	
	R722	QRD167J-472	4.7K	1/6W	CARBON	
	R723	QRD167J-154	150K	1/6W	CARBON	
	R724	QRD167J-562	5.6K	1/6W	CARBON	
	R725	QRD167J-103	10K	1/6W	CARBON	
	R726	QRD167J-104	100K	1/6W	CARBON	
	R727	QRD167J-183	18K	1/6W	CARBON	
	R728	QRD167J-562	5.6K	1/6W	CARBON	
	R731	QRD167J-104	100K	1/6W	CARBON	
	R732	QRD167J-104	100K	1/6W	CARBON	
	R733	QRD167J-394	390K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R734	QRD167J-394	390K 1/6W CARBON	
	R735	QRD167J-121	120 1/6W CARBON	
	R736	QRD167J-182	1.8K 1/6W CARBON	
	R737	QRD167J-681	680 1/6W CARBON	
	R738	QRD167J-473	47K 1/6W CARBON	
	R739	QRD167J-331	330 1/6W CARBON	
	R740	QRD167J-333	33K 1/6W CARBON	
	R741	QRD167J-273	27K 1/6W CARBON	
	R742	QRD167J-394	390K 1/6W CARBON	
	R743	QRD167J-105	1M 1/6W CARBON	
	R744	QRD167J-470	47 1/6W CARBON	
	R745	QRD167J-473	47K 1/6W CARBON	
	R746	QRD167J-272	2.7K 1/6W CARBON	
	R747	QRD167J-682	6.8K 1/6W CARBON	
	R748	QRD167J-104	100K 1/6W CARBON	
	R749	QRD167J-562	5.6K 1/6W CARBON	
	R750	QRD167J-105	1M 1/6W CARBON	
	R751	QRD167J-105	1M 1/6W CARBON	
	R752	QRD167J-104	100K 1/6W CARBON	
	R753	QRD167J-562	5.6K 1/6W CARBON	
	R754	QRD167J-104	100K 1/6W CARBON	
	R755	QRD167J-103	10K 1/6W CARBON	
	R756	QRD167J-470	47 1/6W CARBON	
	R757	QRD167J-183	18K 1/6W CARBON	
	R759	QRD167J-680	68 1/6W CARBON	
	R760	QRD167J-680	68 1/6W CARBON	
	R761	QRD167J-564	560K 1/6W CARBON	
	R762	QRD167J-224	220K 1/6W CARBON	
	R763	QRD167J-393	39K 1/6W CARBON	
	R764	QRD167J-224	220K 1/6W CARBON	
	R765	QRD167J-562	5.6K 1/6W CARBON	
	R766	QRD167J-392	3.9K 1/6W CARBON	
	R767	QRD167J-680	68 1/6W CARBON	
	R768	QRD167J-103	10K 1/6W CARBON	
	R769	QRD167J-102	1K 1/6W CARBON	
	R770	QRD167J-471	470 1/6W CARBON	
	R771	QRD167J-683	68K 1/6W CARBON	
	R772	QRD167J-183	18K 1/6W CARBON	
	R773	QRD167J-273	27K 1/6W CARBON	
	R774	QRD167J-470	47 1/6W CARBON	
	R775	QRD167J-335	3.3M 1/6W CARBON	
	R776	QRD167J-680	68 1/6W CARBON	
	R781	QRD167J-684	680K 1/6W CARBON	
	R782	QRD167J-684	680K 1/6W CARBON	
	R783	QRD167J-823	82K 1/6W CARBON	
	R784	QRD167J-470	47 1/6W CARBON	
	R785	QRD167J-683	68K 1/6W CARBON	
	R786	QRD167J-123	12K 1/6W CARBON	
	R787	QRD167J-152	1.5K 1/6W CARBON	
	R788	QRD167J-2R2	2.2 1/6W CARBON	
	R790	QRD167J-684	680K 1/6W CARBON	
	R791	QRD167J-513	51K 1/6W CARBON	
	R792	QRD167J-513	51K 1/6W CARBON	
	R793	QRD167J-683	68K 1/6W CARBON	
	R794	QRD167J-683	68K 1/6W CARBON	
	R795	QRD167J-221	220 1/6W CARBON	
	R801	QRD167J-563	56K 1/6W CARBON	
	R802	QRD167J-563	56K 1/6W CARBON	
	R803	QRD167J-222	2.2K 1/6W CARBON	
	R804	QRD167J-681	680 1/6W CARBON	
	R805	QVPA601-202A	2K VARIABLE	
	R806	QRD167J-561	560 1/6W CARBON	
	R807	QRD167J-334	330K 1/6W CARBON	
	R808	QRD167J-222	2.2K 1/6W CARBON	
	R809	QVPA601-154A	150K VARIABLE	
	R810	QRD167J-223	22K 1/6W CARBON	
	R811	QRD167J-682	6.8K 1/6W CARBON	
	R812	QRD167J-103	10K 1/6W CARBON	
	R813	QRD167J-562	5.6K 1/6W CARBON	
	R814	QRD167J-562	5.6K 1/6W CARBON	
	R815	QRD167J-562	5.6K 1/6W CARBON	
	R816	QRD167J-562	5.6K 1/6W CARBON	
	R817	QRD167J-183	18K 1/6W CARBON	
	R819	QRD167J-103	10K 1/6W CARBON	
	R820	QRD167J-224	220K 1/6W CARBON	
	R821	QRD167J-103	10K 1/6W CARBON	
	R822	QRD167J-474	470K 1/6W CARBON	
	R823	QRD167J-434	430K 1/6W CARBON	
	R824	QRD167J-472	4.7K 1/6W CARBON	
	R825	QRD167J-103	10K 1/6W CARBON	
	R827	QRD167J-104	100K 1/6W CARBON	
	R828	QRD167J-104	100K 1/6W CARBON	
	R829	QRD167J-681	680 1/6W CARBON	
	R830	QRD167J-183	18K 1/6W CARBON	
	R831	QRD167J-104	100K 1/6W CARBON	
	R832	QRD167J-102	1K 1/6W CARBON	
	R833	QRD167J-562	5.6K 1/6W CARBON	
	R834	QRD167J-183	18K 1/6W CARBON	
	R835	QRD167J-183	18K 1/6W CARBON	
	R836	QRD167J-394	390K 1/6W CARBON	
	R837	QRD167J-470	47 1/6W CARBON	
	R838	QRD167J-562	5.6K 1/6W CARBON	
	R839	QRD167J-183	18K 1/6W CARBON	
	R840	QRD167J-102	1K 1/6W CARBON	
	R841	QRD167J-682	6.8K 1/6W CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R842	QRD167J-181	180 1/6W CARBON	
	R843	QRD167J-331	330 1/6W CARBON	
	R844	QRD167J-272	2.7K 1/6W CARBON	
	R845	QRD167J-471	470 1/6W CARBON	
	R846	QRD167J-680	68 1/6W CARBON	
⚠	R847	QRV144F-1602	16K 1/4W M.FILM	
⚠	R848	QRV144F-1502	15K 1/4W M.FILM	
	R849	QRD167J-183	18K 1/6W CARBON	
	R850	QRD167J-472	4.7K 1/6W CARBON	
	R851	QRD167J-183	18K 1/6W CARBON	
	R852	QRD167J-102	1K 1/6W CARBON	
	R853	QRD167J-152	1.5K 1/6W CARBON	
	R854	QRD167J-104	100K 1/6W CARBON	
	R855	QRD167J-821	820 1/6W CARBON	
	R856	QRD167J-472	4.7K 1/6W CARBON	
	R857	QRD167J-471	470 1/6W CARBON	
	R858	QRD167J-682	6.8K 1/6W CARBON	
	R859	QRD167J-105	1M 1/6W CARBON	
	R861	QRD167J-103	10K 1/6W CARBON	
	R862	QRD167J-272	2.7K 1/6W CARBON	
	R863	QRD167J-102	1K 1/6W CARBON	
	R864	QRD167J-271	270 1/6W CARBON	
	R865	QRD167J-103	10K 1/6W CARBON	
	R866	QRD167J-562	5.6K 1/6W CARBON	
	R867	QRD167J-472	4.7K 1/6W CARBON	
	R868	QRD167J-822	8.2K 1/6W CARBON	
	R869	QRD167J-103	10K 1/6W CARBON	
	R870	QRD167J-101	100 1/6W CARBON	
	R871	QRD167J-472	4.7K 1/6W CARBON	
	R872	QRD167J-472	4.7K 1/6W CARBON	
	R873	QRD167J-751	750 1/6W CARBON	
	R874	QRD167J-751	750 1/6W CARBON	
	R875	QRD167J-471	470 1/6W CARBON	
	R876	QRD167J-471	470 1/6W CARBON	
	R877	QRD167J-221	220 1/6W CARBON	
	R878	QRD167J-221	220 1/6W CARBON	
	R879	QRD167J-105	1M 1/6W CARBON	
	R880	QRD167J-105	1M 1/6W CARBON	
	R881	QRD167J-392	3.9K 1/6W CARBON	
	R882	QRD167J-392	3.9K 1/6W CARBON	
	R883	QRD167J-821	820 1/6W CARBON	
	R884	QRD167J-821	820 1/6W CARBON	
	R885	QRD167J-821	820 1/6W CARBON	
	R886	QRD167J-821	820 1/6W CARBON	
	R887	QRD167J-272	2.7K 1/6W CARBON	
	R888	QRD167J-272	2.7K 1/6W CARBON	
	R889	QRD167J-273	27K 1/6W CARBON	
	R890	QRD167J-273	27K 1/6W CARBON	
	R891	QRD167J-561	560 1/6W CARBON	
	R892	QRD167J-561	560 1/6W CARBON	
	R893	QRD167J-104	100K 1/6W CARBON	
	R894	QRD167J-105	1M 1/6W CARBON	
	R895	QRD167J-681	680 1/6W CARBON	
	R901	QRD167J-105	1M 1/6W CARBON	
	R902	QRD167J-473	47K 1/6W CARBON	
	R903	QRD167J-473	47K 1/6W CARBON	
	R904	QRD167J-103	10K 1/6W CARBON	
	R921	QRD167J-103	10K 1/6W CARBON	
	R922	QRD167J-105	1M 1/6W CARBON	
	R923	QRD167J-104	100K 1/6W CARBON	
	R924	QRD167J-105	1M 1/6W CARBON	
	R925	QRD167J-223	22K 1/6W CARBON	
	R926	QRD167J-102	1K 1/6W CARBON	
	R930	QRD167J-184	180K 1/6W CARBON	
	R931	QRD167J-224	220K 1/6W CARBON	
	R932	QRD167J-224	220K 1/6W CARBON	
	R933	QRD167J-224	220K 1/6W CARBON	
	R934	QRD167J-183	18K 1/6W CARBON	
	R935	QRD167J-153	15K 1/6W CARBON	
	R936	QRD167J-683	68K 1/6W CARBON	
	R940	QRD167J-102	1K 1/6W CARBON	
	R941	QRD167J-102	1K 1/6W CARBON	
	R942	QRD167J-103	10K 1/6W CARBON	
	R943	QRD167J-103	10K 1/6W CARBON	
	R945	QRD167J-103	10K 1/6W CARBON	
	R946	QRD167J-103	10K 1/6W CARBON	
	R947	QRD167J-103	10K 1/6W CARBON	
	R948	QRD167J-103	10K 1/6W CARBON	
	R949	QRD167J-472	4.7K 1/6W CARBON	
	R950	QRD167J-271	270 1/6W CARBON	
	R952	QRD167J-271	270 1/6W CARBON	
	R953	QRD167J-271	270 1/6W CARBON	
	R954	QRD167J-391	390 1/6W CARBON	
	R955	QRD167J-391	390 1/6W CARBON	
	R956	QRD167J-391	390 1/6W CARBON	
	R961	QRD167J-103	10K 1/6W CARBON	
	R962	QRD167J-103	10K 1/6W CARBON	
	R963	QRD167J-103	10K 1/6W CARBON	
	R964	QRD167J-103	10K 1/6W CARBON	
	R965	QRD167J-103	10K 1/6W CARBON	
	R966	QRD167J-103	10K 1/6W CARBON	
	R970	QRD167J-105	1M 1/6W CARBON	
	R971	QRD167J-103	10K 1/6W CARBON	
	R972	QRD167J-151	150 1/6W CARBON	
	R973	QRD167J-153	15K 1/6W CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R974	QRD167J-222	2.2K 1/6W CARBON	
	R975	QRD167J-103	10K 1/6W CARBON	
	R976	QRD167J-471	470 1/6W CARBON	
	VR934	QVPA603-203A	20K VARIABLE	
	VR935	QVPA603-103A	10K VARIABLE	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10080-004	PRINTED BOARD	
		EWT011-078	TERMINAL WIRE	
		EWT011-133	TERMINAL WIRE	
		EWT011-137	TERMINAL WIRE	
		E306951-221SS	FL DISPLAY HOLDER	
		E3400-420	FELT SPACER	
		E70859-001	EARTH PLATE	
	J511	EMN00TV-405A	4P PIN JACK	
	J521	VMC0107-007	CONNECT TERMINAL(7PIN)	
	J750	VMC0107-003	CONNECT TERMINAL(3PIN)	
	J802	VMC0107-003	CONNECT TERMINAL(3PIN)	
	J925	VMC0107-003	CONNECT TERMINAL(3PIN)	
	J943	VMC0107-008	CONNECT TERMINAL(8PIN)	
	J944	VMC0107-008	CONNECT TERMINAL(8PIN)	
	L841	ENZ3001-002	OSCILLATOR COIL	
	P701	EMV5109-010B	PLUG ASSY(10PIN)	
	P702	EMV7123-013R	CONNECTOR(13PIN)	
	P711	VMC0193-S09	CONNECT TERMINAL(9PIN)	
	P712	VMC0193-S06	CONNECT TERMINAL(6PIN)	
	P801	VMC0107-005	CONNECT TERMINAL(5PIN)	
	P811	VMC0193-P09	CONNECT TERMINAL(9PIN)	
	P812	VMC0193-P06	CONNECT TERMINAL(6PIN)	
	S901	ESP0001-018	TACT SWITCH(STOP/CLEAR)	
	S902	ESP0001-018	TACT SWITCH(▶▶I)	
	S903	ESP0001-018	TACT SWITCH(PLAY/PAUSE)	
	S904	ESP0001-018	TACT SWITCH(OPEN/CLOSE)	
	S905	ESP0001-018	TACT SWITCH(DISPLAY)	
	S906	ESP0001-018	TACT SWITCH(A.EDIT)	
	S907	ESP0001-018	TACT SWITCH(I◀◀)	
	S908	ESP0001-018	TACT SWITCH(FADE)	

⚠ : SAFETY PARTS

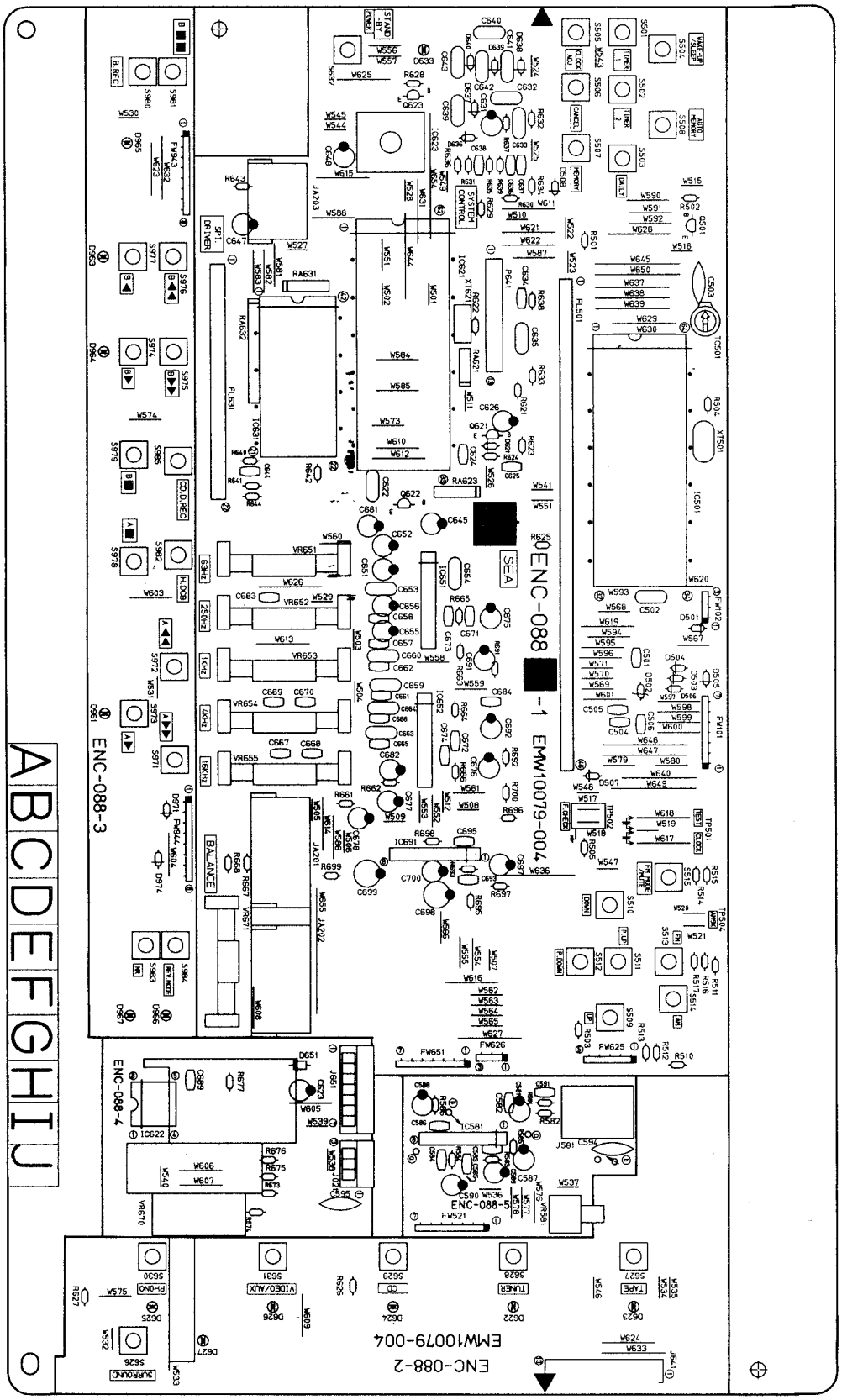
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	S909	ESP0001-018	TACT SWITCH(REPEAT)	
	S910	ESP0001-018	TACT SWITCH(SIDE A/B)	
	S911	ESP0001-018	TACT SWITCH(RANDOM)	
	S951	ESB1100-003	LEAF SWITCH(REV REC)	
	S952	ESB1100-003	LEAF SWITCH(BCrO2)	
	S953	ESB1100-003	LEAF SWITCH(B PACK)	
	S955	ESB1100-003	LEAF SWITCH(FWD REC)	
	S956	ESB1100-003	LEAF SWITCH(A PACK)	
	S957	ESB1100-003	LEAF SWITCH(ACrO2)	
	X841	ECX0086-436EF	RESONATOR	
	CF901	ECX0004-194KM	RESONATOR	
	FL901	ELU0001-114	FL TUBE	
	FS921	EXO020005N10S	SPACER	
	FS923	EXO010005N10S	SPACER	
	FS924	EXO015005N10S	SPACER	
	FW750	EWR33B-30LST	FLAT WIRE(3PIN)	
	FW751	EWR36B-25LST	FLAT WIRE(6PIN)	
	FW802	EWR33B-45LST	FLAT WIRE(3PIN)	
	FW921	EWR3AB-25LST	FLAT WIRE(10PIN)	
	FW922	EWR37B-25LST	FLAT WIRE(7PIN)	
	FW931	EWR37B-13LST	FLAT WIRE(7PIN)	
	FW932	EWR37B-16LST	FLAT WIRE(7PIN)	
	FW933	EWR38B-16LST	FLAT WIRE(8PIN)	
	FW934	EWR34B-13LST	FLAT WIRE(4PIN)	
	FW941	EWR35B-20SST	FLAT WIRE(5PIN)	
	FW942	EWR34B-13SST	FLAT WIRE(4PIN)	
	JA501	EMV7125-014R	CONNECTOR(14PIN)	
	XT921	ECX0004-194KM	RESONATOR	

⚠ : SAFETY PARTS

■ENC-088 □ Front PC Board Ass'y

Note : ENC-088 □ varies according to the areas employed. See note (1) when placing an order.



Note(1)

PC Board Ass'y	Designated Areas
ENC-088 [A]	the U.S.A., Canada
ENC-088 [B]	Universal Type
ENC-088 [C]	Australia
ENC-088 [D]	the U.K., Continental Europe, East Europe
ENC-088 [E]	Italy
ENC-088 [F]	Poland, Soviet Union and Rumania
ENC-088 [G]	Germany

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q501	DTA114YS	SILICON	ROHM	
	Q621	DTC114YS	SILICON	ROHM	
	Q622	DTA114YS	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC501	HD614089SC35	I.C.	HITACHI	
	IC581	BA15218N	I.C.	ROHM	
	IC621	HD614043SA94	I.C.	HITACHI	
	IC622	LB1639-CV	I.C.	SANYO	
	IC623	SPS-420-1	I.C.	SANYO	
	IC631	LC7566	I.C.	SANYO	
	IC651	BA3812L	I.C.	ROHM	
	IC652	BA3812L	I.C.	ROHM	
	IC691	BA15218N	I.C.	ROHM	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D501	1SS133	SILICON	ROHM	B
	D502	MTZ5.6JC	ZENER	ROHM	
	D503	1SS133	SILICON	ROHM	C
	D504	1SS133	SILICON	ROHM	A
	D504	1SS133	SILICON	ROHM	F
	D505	1SS133	SILICON	ROHM	B
	D505	1SS133	SILICON	ROHM	F
	D506	1SS133	SILICON	ROHM	A
	D506	1SS133	SILICON	ROHM	E
	D507	1SS133	SILICON	ROHM	
	D508	1SS133	SILICON	ROHM	
	D621	1SS133	SILICON	ROHM	
	D622	SLR-34VC3F	L.E.D.	ROHM	
	D623	SLR-34VC3F	L.E.D.	ROHM	
	D624	SLR-34VC3F	L.E.D.	ROHM	
	D625	SLR-34VC3F	L.E.D.	ROHM	
	D626	SLR-34VC3F	L.E.D.	ROHM	
	D627	SLR-34DC3F	L.E.D.	ROHM	
	D633	SLR-34VC3F	L.E.D.	ROHM	
	D636	1SS133	SILICON	ROHM	
	D637	1SS133	SILICON	ROHM	
	D638	1SS133	SILICON	ROHM	
	D639	1SS133	SILICON	ROHM	
	D640	1SS133	SILICON	ROHM	
	D651	1SR139-200	SILICON	ROHM	
	D961	SLR-34MC3F	L.E.D.	ROHM	
	D963	SLR-34MC3F	L.E.D.	ROHM	
	D964	SLR-34MC3F	L.E.D.	ROHM	
	D965	SLR-34VC3F	L.E.D.	ROHM	
	D966	SLR-34VC3F	L.E.D.	ROHM	
	D967	SLR-34VC3F	L.E.D.	ROHM	
	D971	1SS133	SILICON	ROHM	
	D974	1SS133	SILICON	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C501	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C502	QCZ0202-155	1.5MF	25V	CERAMIC	
	C503	QCT26CH-120	12PF	50V	CERAMIC	
	C504	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C505	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C506	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C581	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C582	QCGB1HK-102	1000PF	50V	CERAMIC	
	C583	QCBB1HK-101	100PF	50V	CERAMIC	
	C584	QCBB1HK-101	100PF	50V	CERAMIC	
	C585	QCBB1HK-101	100PF	50V	CERAMIC	
	C586	QCBB1HK-101	100PF	50V	CERAMIC	
	C587	QER51EM-106	10MF	25V	ELECTRO	
	C588	QER51EM-106	10MF	25V	ELECTRO	
	C589	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C590	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C591	QCGB1HK-102	1000PF	50V	CERAMIC	D
	C591	QCGB1HK-102	1000PF	50V	CERAMIC	E
	C591	QCGB1HK-102	1000PF	50V	CERAMIC	F
	C591	QCGB1HK-102	1000PF	50V	CERAMIC	G
	C594	QCF21HP-473	0.047MF	50V	CERAMIC	
	C595	QCF21HP-473	0.047MF	50V	CERAMIC	
	C622	QCZ0202-155	1.5MF	25V	CERAMIC	
	C623	QER60JM-476	47MF	6.3V	ELECTRO	
	C624	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C625	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C626	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C631	QER51HM-225G	2.2MF	50V	ELECTRO	
	C632	QFV81HJ-104	0.1MF	50V	T.FILM	
	C633	QFV81HJ-474	0.47MF	50V	T.FILM	
	C634	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C635	QFV81HJ-333	0.033MF	50V	T.FILM	
	C636	QCXB1CM-222	2200PF	16V	CERAMIC	
	C637	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C638	QCBB1HK-181	180PF	50V	CERAMIC	
	C639	QFV81HJ-683	0.068MF	50V	T.FILM	
	C640	QFV81HJ-683	0.068MF	50V	T.FILM	
	C641	QFV81HJ-683	0.068MF	50V	T.FILM	
	C642	QFV81HJ-683	0.068MF	50V	T.FILM	
	C643	QFV81HJ-683	0.068MF	50V	T.FILM	
	C644	QCBB1HK-151	150PF	50V	CERAMIC	
	C645	QEK51EM-475G	4.7MF	25V	ELECTRO	
	C647	QER60JM-476	47MF	6.3V	ELECTRO	
	C648	QEK51HM-226	22MF	50V	ELECTRO	
	C651	QER51HM-225G	2.2MF	50V	ELECTRO	
	C652	QER51HM-225G	2.2MF	50V	ELECTRO	
	C653	QFV81HJ-273	0.027MF	50V	T.FILM	
	C654	QFV81HJ-273	0.027MF	50V	T.FILM	
	C655	QER51HM-474G	0.47MF	50V	ELECTRO	
	C656	QER51HM-474G	0.47MF	50V	ELECTRO	
	C657	QCVB1CM-822	8200PF	16V	CERAMIC	
	C658	QCVB1CM-822	8200PF	16V	CERAMIC	
	C659	QFV81HJ-124	0.12MF	50V	T.FILM	
	C660	QFV81HJ-124	0.12MF	50V	T.FILM	
	C661	QCXB1CM-222	2200PF	16V	CERAMIC	
	C662	QCXB1CM-222	2200PF	16V	CERAMIC	
	C663	QFV81HJ-333	0.033MF	50V	T.FILM	
	C664	QFV81HJ-333	0.033MF	50V	T.FILM	
	C665	QCBB1HK-471	470PF	50V	CERAMIC	
	C666	QCBB1HK-471	470PF	50V	CERAMIC	
	C667	QCVB1CM-822	8200PF	16V	CERAMIC	
	C668	QCVB1CM-822	8200PF	16V	CERAMIC	
	C669	QCBB1HK-121	120PF	50V	CERAMIC	
	C670	QCBB1HK-121	120PF	50V	CERAMIC	
	C671	QCBB1HK-471	470PF	50V	CERAMIC	
	C672	QCBB1HK-471	470PF	50V	CERAMIC	
	C673	QCBB1HK-101	100PF	50V	CERAMIC	
	C674	QCBB1HK-101	100PF	50V	CERAMIC	
	C675	QER51HM-225G	2.2MF	50V	ELECTRO	
	C676	QER51HM-225G	2.2MF	50V	ELECTRO	
	C677	QER51CM-107	100MF	16V	ELECTRO	
	C678	QER51CM-107	100MF	16V	ELECTRO	
	C681	QER51CM-106G	10MF	16V	ELECTRO	
	C682	QER51CM-106G	10MF	16V	ELECTRO	
	C683	QCGB1HK-102	1000PF	50V	CERAMIC	
	C684	QCGB1HK-102	1000PF	50V	CERAMIC	
	C689	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C691	QER51HM-225G	2.2MF	50V	ELECTRO	
	C692	QER51HM-225G	2.2MF	50V	ELECTRO	
	C693	QCSB1HJ-100	10PF	50V	CERAMIC	
	C695	QCSB1HJ-470	47PF	50V	CERAMIC	
	C697	QER51HM-225G	2.2MF	50V	ELECTRO	
	C698	QER51CM-476	47MF	16V	ELECTRO	
	C699	QER51CM-476	47MF	16V	ELECTRO	
	C700	QER51HM-225G	2.2MF	50V	ELECTRO	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R501	QRD167J-103	10K 1/6W CARBON	
	R502	QRD167J-104	100K 1/6W CARBON	
	R503	QRD167J-153	15K 1/6W CARBON	
	R504	QRD167J-473	47K 1/6W CARBON	
	R505	QRD167J-153	15K 1/6W CARBON	
	R510	QRD167J-2R2	2.2 1/6W CARBON	
	R511	QRD167J-2R2	2.2 1/6W CARBON	
	R512	QRD167J-2R2	2.2 1/6W CARBON	
	R513	QRD167J-2R2	2.2 1/6W CARBON	
	R514	QRD167J-2R2	2.2 1/6W CARBON	
	R515	QRD167J-2R2	2.2 1/6W CARBON	
	R516	QRD167J-2R2	2.2 1/6W CARBON	
	R517	QRD167J-2R2	2.2 1/6W CARBON	
	R581	QRD167J-331	330 1/6W CARBON	
	R582	QRD167J-103	10K 1/6W CARBON	
	R583	QRD167J-273	27K 1/6W CARBON	
	R584	QRD167J-273	27K 1/6W CARBON	
	R585	QRD167J-331	330 1/6W CARBON	
	R586	QRD167J-331	330 1/6W CARBON	
	R621	QRD167J-222	2.2K 1/6W CARBON	
	R622	QRD167J-105	1M 1/6W CARBON	
	R623	QRD167J-223	22K 1/6W CARBON	
	R624	QRD167J-104	100K 1/6W CARBON	
	R625	QRD167J-103	10K 1/6W CARBON	
	R626	QRD167J-221	220 1/6W CARBON	
	R627	QRD167J-221	220 1/6W CARBON	
	R628	QRD167J-221	220 1/6W CARBON	
	R629	QRD167J-223	22K 1/6W CARBON	
	R630	QRD167J-223	22K 1/6W CARBON	
	R631	QRD167J-102	1K 1/6W CARBON	
	R632	QRD167J-102	1K 1/6W CARBON	
	R633	QRD167J-102	1K 1/6W CARBON	
	R634	QRD167J-821	820 1/6W CARBON	
	R635	QRD167J-224	220K 1/6W CARBON	
	R636	QRD167J-512	5.1K 1/6W CARBON	
	R637	QRD167J-512	5.1K 1/6W CARBON	
	R638	QRD167J-222	2.2K 1/6W CARBON	
	R639	QRD167J-153	15K 1/6W CARBON	
	R640	QRD167J-183	18K 1/6W CARBON	
	R641	QRD167J-334	330K 1/6W CARBON	
	R642	QRD167J-474	470K 1/6W CARBON	
	R643	QRD167J-120	12 1/6W CARBON	
	R644	QRD167J-120	12 1/6W CARBON	
	R661	QRD167J-102	1K 1/6W CARBON	
	R662	QRD167J-102	1K 1/6W CARBON	
	R663	QRD167J-392	3.9K 1/6W CARBON	
	R664	QRD167J-392	3.9K 1/6W CARBON	
	R665	QRD167J-392	3.9K 1/6W CARBON	
	R666	QRD167J-392	3.9K 1/6W CARBON	
	R667	QRD167J-222	2.2K 1/6W CARBON	
	R668	QRD167J-222	2.2K 1/6W CARBON	
	R673	QRD167J-273	27K 1/6W CARBON	
	R674	QRD167J-273	27K 1/6W CARBON	
	R675	QRD167J-102	1K 1/6W CARBON	
	R676	QRD167J-102	1K 1/6W CARBON	
	R691	QRD167J-104	100K 1/6W CARBON	
	R692	QRD167J-104	100K 1/6W CARBON	
	R693	QRD167J-474	470K 1/6W CARBON	
	R695	QRD167J-472	4.7K 1/6W CARBON	
	R696	QRD167J-104	100K 1/6W CARBON	
	R697	QRD167J-101	100 1/6W CARBON	
	R698	QRD167J-100	10 1/6W CARBON	
	R699	QRD167J-100	10 1/6W CARBON	
	R700	QRD167J-104	100K 1/6W CARBON	
	RA621	QRB049J-223	22K 1/10W R.NETWORK	
	RA623	QRB059J-223	22K 1/10W R.NETWORK	
	RA631	QRB059J-104	100K 1/10W R.NETWORK	
	RA632	QRB139J-104	100K 1/10W R.NETWORK	
	VR581	QVAB77B-E54B	50K VARIABLE	
	VR651	QVXB06W-E15B	100K VARIABLE	
	VR652	QVXB06W-E15B	100K VARIABLE	
	VR653	QVXB06W-E15B	100K VARIABLE	
	VR654	QVXB06W-E15B	100K VARIABLE	
	VR655	QVXB06W-E15B	100K VARIABLE	
	VR670	QVDB91B-E15F	100K VARIABLE	
	VR671	QVXB06W-E15C	100K VARIABLE (ボリューム)	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10079-004	PRINTED BOARD	
		QWE350-04DD	WIRE	
		QWE370-04BB	WIRE	
	J021	VMC0107-003	CONNECT TERMINAL(3PIN)	
	J581	QMS3L10-EDOH	MINI JACK	

⚠ : SAFETY PARTS

Others

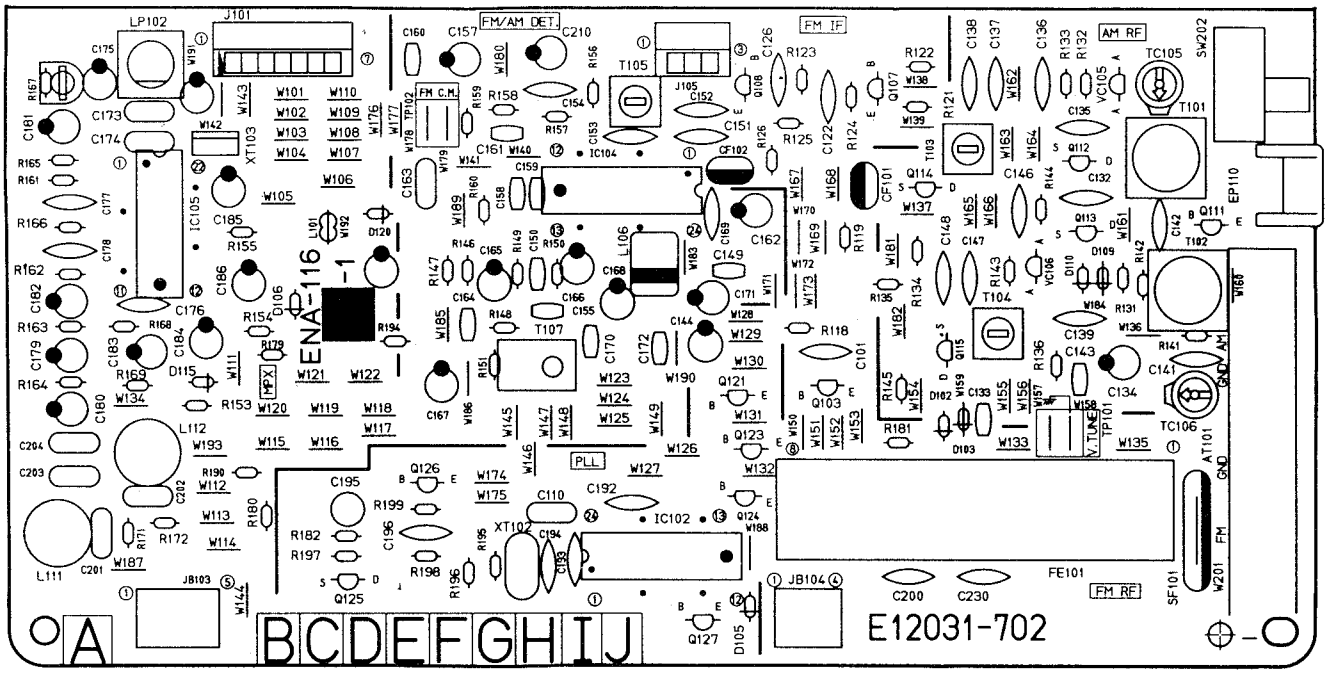
⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	J641	EMV7124-013	CONNECTOR(13PIN)	
	J651	VMC0107-007	CONNECT TERMINAL(7PIN)	
	P641	EMV5123-D094	PLUG ASSY(13PIN)	
	S501	ESP0001-018	TACT SWITCH(TIMER 1)	
	S502	ESP0001-018	TACT SWITCH(TIMER 2)	
	S503	ESP0001-018	TACT SWITCH(DIARY)	
	S504	ESP0001-018	TACT SWITCH(WAKE-UP/SLEEP)	
	S505	ESP0001-018	TACT SWITCH(CLOCK ADJ.)	
	S506	ESP0001-018	TACT SWITCH(CANCEL)	
	S507	ESP0001-018	TACT SWITCH(MEMORY)	
	S508	ESP0001-018	TACT SWITCH(AUTO MEMORY)	
	S509	ESP0001-018	TACT SWITCH(UP)	
	S510	ESP0001-018	TACT SWITCH(DOWN)	
	S511	ESP0001-018	TACT SWITCH(PRESET UP)	
	S512	ESP0001-018	TACT SWITCH(PRESET DOWN)	
	S513	ESP0001-018	TACT SWITCH(FM)	
	S514	ESP0001-018	TACT SWITCH(AM)	
	S515	ESP0001-018	TACT SWITCH(FM MODE/MUTE)	
	S626	ESP0001-018	TACT SWITCH(SURROUND)	
	S627	ESP0001-018	TACT SWITCH(TAPE)	
	S628	ESP0001-018	TACT SWITCH(TUNER)	
	S629	ESP0001-018	TACT SWITCH(CD)	
	S630	ESP0001-018	TACT SWITCH(AUX)	
	S631	ESP0001-018	TACT SWITCH(VCR)	
	S632	ESP0001-018	TACT SWITCH(POWER SWITCH)	
	S971	ESP0001-018	TACT SWITCH(A DECK REW)	
	S972	ESP0001-018	TACT SWITCH(A DECK F.FWD)	
	S973	ESP0001-018	TACT SWITCH(A DECK PLAY)	
	S974	ESP0001-018	TACT SWITCH(B DECK REV.PLAY)	
	S975	ESP0001-018	TACT SWITCH(B DECK REW)	
	S976	ESP0001-018	TACT SWITCH(B DECK F.FWD)	
	S977	ESP0001-018	TACT SWITCH(B DECK PLAY)	
	S978	ESP0001-018	TACT SWITCH(A DECK STOP)	
	S979	ESP0001-018	TACT SWITCH(B DECK STOP)	
	S980	ESP0001-018	TACT SWITCH(B DECK REC)	
	S981	ESP0001-018	TACT SWITCH(B DECK PAUSE)	
	S982	ESP0001-018	TACT SWITCH(H.DUBBING)	
	S983	ESP0001-018	TACT SWITCH(DOLBY)	
	S984	ESP0001-018	TACT SWITCH(REV.MODE)	
	S985	ESP0001-018	TACT SWITCH(CD REC)	
	BK501	E306958-221	FL DISPLAY HOLDER	
	BK631	E307397-221	FL DISPLAY HOLDER	
	FL501	ELU0001-101	FL TUBE	
	FL631	ELU0001-117	FL TUBE	
	FS501	E3400-449	SPACER	
	FS631	E306805-014	FELT SPACER	
	FS671	E3400-431	SPACER	
	FS672	E3400-431	SPACER	
	FW101	EWR37B-20LST	FLAT WIRE(7PIN)	
	FW102	EWR33B-25LST	FLAT WIRE(3PIN)	B
	FW521	EWR37B-30LST	FLAT WIRE(7PIN)	
	FW651	EWR37B-16LST	FLAT WIRE(7PIN)	
	FW801	EWR35B-55LST	FLAT WIRE(5PIN)	
	FW925	EWR33B-35LST	FLAT WIRE(3PIN)	
	FW943	EWR38B-25LST	FLAT WIRE(8PIN)	
	FW944	EWR38B-25LST	FLAT WIRE(8PIN)	
	JA201	VMC0193-P10	CONNECT TERMINAL(10PIN)	
	JA202	VMC0193-P10	CONNECT TERMINAL(10PIN)	
	JA203	VMC0193-P06	CONNECT TERMINAL(6PIN)	
	TC501	ENZ1003-015	TRIMMER	
	TW581	VWE350-10A3NT	TERMINAL WIRE	
	XT501	ECX4194-304CF	RESONATOR	
	XT621	ECX0004-194KM	RESONATOR	

⚠ : SAFETY PARTS

■ENA-116 ☐ Tuner PC Board Ass'y

Note : ENA-116 ☐ varies according to the areas employed. See note (1) when placing an order.

(Only for the U.S.A. , Canada , Australia , Universal Type)



Note(1)

PC Board Ass'y	Designated Areas
ENA-116 [A]	the U.S.A. , Canada
ENA-116 [B]	Universal Type ,
ENA-116 [C]	Australia

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q103	2SC461(B,C)	SILICON	HITACHI	
	Q107	2SC535(B,C)	SILICON	HITACHI	
	Q108	2SC461(B,C)	SILICON	HITACHI	
	Q112	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q123	DTA114YS	SILICON	ROHM	
	Q124	DTA114YS	SILICON	ROHM	
	Q125	2SK301(Q2)	F.E.T	MATSUSHITA	
	Q126	2SC458(D)	SILICON	HITACHI	
	Q127	DTC144ES	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC102	LC7218	I.C.	SANYO	
	IC104	LA1266A	I.C.	SANYO	
	IC105	LA3401	I.C.	SANYO	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
	D105	1SS133	SILICON	ROHM	
	D106	1SS133	SILICON	ROHM	
	D115	1SS133	SILICON	ROHM	
	D120	1SS133	SILICON	ROHM	
	VC105	SVC342(L)	VARICAP	SANYO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C101	QCF21HP-223	0.022MF	50V	CERAMIC	
	C110	QCZ0202-155	1.5MF	25V	CERAMIC	
	C122	QCF21HP-223	0.022MF	50V	CERAMIC	
	C126	QCF21HP-223	0.022MF	50V	CERAMIC	
	C132	QCS21HJ-561	560PF	50V	CERAMIC	
	C133	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C134	QETB1EM-106	10MF	25V	ELECTRO	
	C135	QCC21EM-223	0.022MF	25V	CERAMIC	
	C136	QCT26CH-180	18PF	50V	CERAMIC	
	C137	QCT26CH-221	220PF	50V	CERAMIC	
	C138	QCT26CH-241	240PF	50V	CERAMIC	
	C149	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C150	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C151	QCF21HP-223	0.022MF	50V	CERAMIC	
	C152	QCF21HP-223	0.022MF	50V	CERAMIC	
	C153	QCC21EM-223	0.022MF	25V	CERAMIC	
	C154	QCF21HP-223	0.022MF	50V	CERAMIC	
	C155	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C157	QETB1HM-474	0.47MF	50V	ELECTRO	
	C158	QCBB1HK-101	100PF	50V	CERAMIC	
	C159	QCBB1HK-101	100PF	50V	CERAMIC	
	C160	QCBB1HK-221	220PF	50V	CERAMIC	
	C161	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C162	QETB1EM-106	10MF	25V	ELECTRO	
	C163	QCY21HK-102	1000PF	50V	CERAMIC	
	C164	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C165	QETB1HM-474	0.47MF	50V	ELECTRO	
	C166	QETB1HM-225	2.2MF	50V	ELECTRO	
	C167	QETB1HM-225	2.2MF	50V	ELECTRO	
	C168	QETB1HM-475	4.7MF	50V	ELECTRO	
	C169	QCF21HP-223	0.022MF	50V	CERAMIC	
	C170	QCHB1EZ-223	0.022MF	25V	CERAMIC	
	C171	QETB1EM-106	10MF	25V	ELECTRO	
	C172	QCVB1CM-103	0.01MF	16V	CERAMIC	
	C173	QFLB1HJ-393	0.039MF	50V	MYLAR	A
	C173	QFLB1HJ-393	0.039MF	50V	MYLAR	B
	C173	QFLB1HJ-223	0.022MF	50V	MYLAR	C
	C174	QFLB1HJ-473	0.047MF	50V	MYLAR	
	C175	QETB1EM-106	10MF	25V	ELECTRO	
	C176	QCY21HK-102	1000PF	50V	CERAMIC	
	C177	QCS21HJ-821	820PF	50V	CERAMIC	A
	C177	QCS21HJ-821	820PF	50V	CERAMIC	B
	C177	QCS21HJ-391	390PF	50V	CERAMIC	C
	C178	QCS21HJ-821	820PF	50V	CERAMIC	A
	C178	QCS21HJ-821	820PF	50V	CERAMIC	B
	C178	QCS21HJ-391	390PF	50V	CERAMIC	C
	C179	QETB1HM-225	2.2MF	50V	ELECTRO	
	C180	QETB1HM-225	2.2MF	50V	ELECTRO	
	C181	QETB1EM-106	10MF	25V	ELECTRO	
	C182	QETB1HM-225	2.2MF	50V	ELECTRO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C183	QETB1HM-105	1MF 50V ELECTRO	
	C184	QETB1HM-105	1MF 50V ELECTRO	
	C185	QETB1HM-225	2.2MF 50V ELECTRO	
	C186	QETB1HM-474	0.47MF 50V ELECTRO	
	C192	QCC21EM-473	0.047MF 25V CERAMIC	
	C193	QCS21HJ-180	18PF 50V CERAMIC	
	C194	QCS21HJ-180	18PF 50V CERAMIC	
	C195	QEN51HM-474	0.47MF 50V NON POLE	
	C196	QCY21HK-102	1000PF 50V CERAMIC	
	C200	QCF21HP-103	0.01MF 50V CERAMIC	
	C201	QCY21HK-332	3300PF 50V CERAMIC	
	C202	QCY21HK-332	3300PF 50V CERAMIC	
	C203	QCY21HK-182	1800PF 50V CERAMIC	
	C204	QCY21HK-182	1800PF 50V CERAMIC	
	C209	QETB1CM-227	220MF 16V ELECTRO	
	C210	QETB1CM-227	220MF 16V ELECTRO	
	C230	QCF21HP-103	0.01MF 50V CERAMIC	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E12031-702(S)	PRINTED BOARD	
	J101	VMC0107-007	CONNECT TERMINAL(7PIN)	
	J105	VMC0107-003	CONNECT TERMINAL(3PIN)	B
	L106	EQL3001-102K	INDUCTOR	
	L111	EQL2103-393	INDUCTOR	
	L112	EQL2103-393	INDUCTOR	
	T101	EQR1111-014	AM RF COIL	
	T103	EQR1207-015	MW OSC COIL	
	T105	EQT2140-017	I.F. TRANSFORMER	
	T107	ECB1560-008	CERAMIC FILTER	
	AT101	EMB90YV-401K	ANTENNA TERMINAL	
	CF101	ECB2123-006R	CERAMIC FILTER	
	CF102	ECB2123-006R	CERAMIC FILTER	
	EP110	E70225-001	EARTH PLATE	
	FE101	EAF2203-001	FRONT END	
	JB103	EMV7125-005R	CONNECTOR (5PIN)	
	SW202	QSS7A12-E01	SLIDE SWITCH	B
	TC105	ENZ1003-006	TRIMMER	
	XT102	ECX0007-200KC	RESONATOR	
	XT103	ECX0000-456KR	RESONATOR	

⚠ : SAFETY PARTS

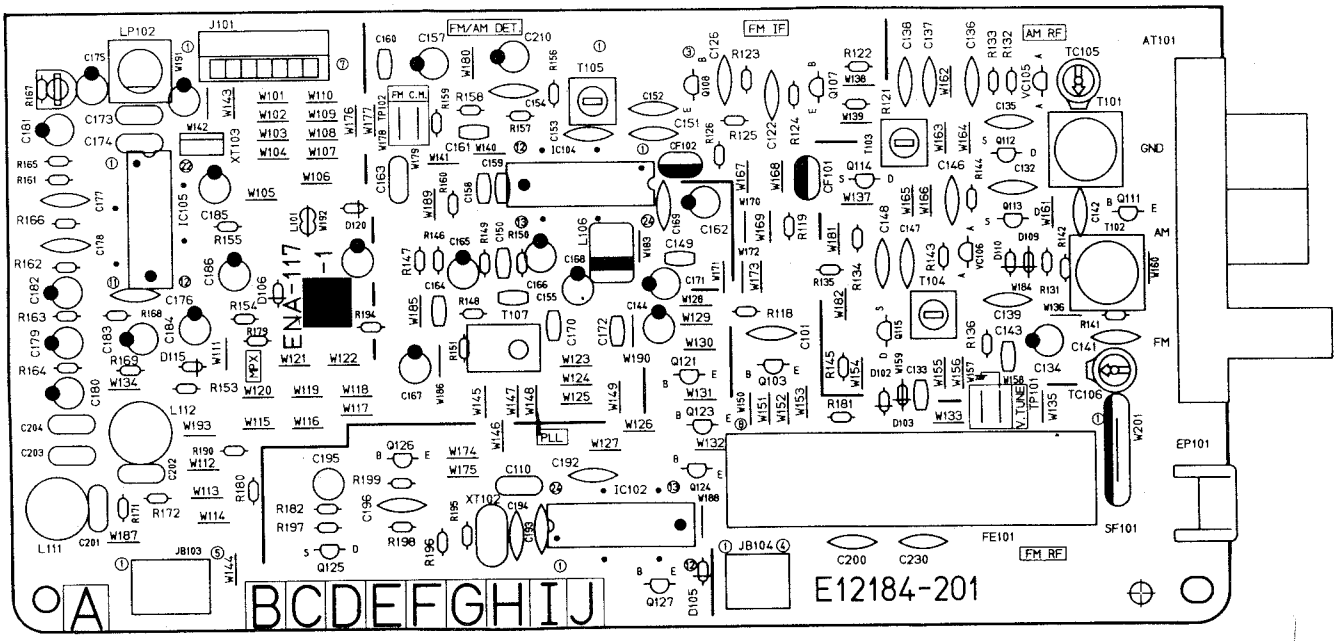
Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R118	QRD167J-332	3.3K 1/6W CARBON	
	R119	QRD167J-221	220 1/6W CARBON	
	R121	QRD167J-391	390 1/6W CARBON	
	R122	QRD167J-272	2.7K 1/6W CARBON	
	R123	QRD167J-102	1K 1/6W CARBON	
	R124	QRD167J-681	680 1/6W CARBON	
	R125	QRD167J-332	3.3K 1/6W CARBON	
	R126	QRD167J-221	220 1/6W CARBON	
	R131	QRD167J-331	330 1/6W CARBON	
	R132	QRD167J-103	10K 1/6W CARBON	
	R133	QRD167J-473	47K 1/6W CARBON	
	R135	QRD167J-470	47 1/6W CARBON	
	R136	QRD167J-103	10K 1/6W CARBON	
	R146	QRD167J-560	56 1/6W CARBON	
	R147	QRD167J-103	10K 1/6W CARBON	
	R148	QRD167J-103	10K 1/6W CARBON	
	R149	QRD167J-223	22K 1/6W CARBON	
	R150	QRD167J-103	10K 1/6W CARBON	
	R151	QRD167J-222	2.2K 1/6W CARBON	
	R153	QRD167J-103	10K 1/6W CARBON	
	R154	QRD167J-103	10K 1/6W CARBON	
	R155	QRD167J-562	5.6K 1/6W CARBON	
	R156	QRD167J-682	6.8K 1/6W CARBON	
	R157	QRD167J-103	10K 1/6W CARBON	
	R158	QRD167J-183	18K 1/6W CARBON	A
	R158	QRD167J-273	27K 1/6W CARBON	B
	R158	QRD167J-273	27K 1/6W CARBON	C
	R159	QRD167J-561	560 1/6W CARBON	
	R160	QRD167J-562	5.6K 1/6W CARBON	A
	R160	QRD167J-562	5.6K 1/6W CARBON	B
	R160	QRD167J-183	18K 1/6W CARBON	C
	R161	QRD167J-823	82K 1/6W CARBON	A
	R161	QRD167J-823	82K 1/6W CARBON	B
	R161	QRD167J-124	120K 1/6W CARBON	C
	R162	QRD167J-823	82K 1/6W CARBON	A
	R162	QRD167J-823	82K 1/6W CARBON	B
	R162	QRD167J-124	120K 1/6W CARBON	C
	R163	QRD167J-472	4.7K 1/6W CARBON	A
	R163	QRD167J-472	4.7K 1/6W CARBON	B
	R163	QRD167J-392	3.9K 1/6W CARBON	C
	R164	QRD167J-472	4.7K 1/6W CARBON	A
	R164	QRD167J-472	4.7K 1/6W CARBON	B
	R164	QRD167J-392	3.9K 1/6W CARBON	C
	R165	QRD167J-184	180K 1/6W CARBON	A
	R165	QRD167J-184	180K 1/6W CARBON	B
	R165	QRD167J-274	270K 1/6W CARBON	C
	R166	QRD167J-184	180K 1/6W CARBON	A
	R166	QRD167J-184	180K 1/6W CARBON	B
	R166	QRD167J-274	270K 1/6W CARBON	C
	R167	QRD167J-393	39K 1/6W CARBON	A
	R167	QRD167J-393	39K 1/6W CARBON	B
	R167	QRD167J-473	47K 1/6W CARBON	C
	R168	QRD167J-103	10K 1/6W CARBON	
	R169	QRD167J-103	10K 1/6W CARBON	
	R171	QRD167J-682	6.8K 1/6W CARBON	
	R172	QRD167J-682	6.8K 1/6W CARBON	
	R179	QRD167J-562	5.6K 1/6W CARBON	
	R180	QRD167J-472	4.7K 1/6W CARBON	
	R181	QRD167J-222	2.2K 1/6W CARBON	
	R182	QRD167J-181	180 1/6W CARBON	
	R190	QRD167J-472	4.7K 1/6W CARBON	
	R194	QRD167J-472	4.7K 1/6W CARBON	
	R195	QRD167J-473	47K 1/6W CARBON	
	R196	QRD167J-103	10K 1/6W CARBON	
	R197	QRD167J-222	2.2K 1/6W CARBON	
	R198	QRD167J-332	3.3K 1/6W CARBON	
	R199	QRD167J-472	4.7K 1/6W CARBON	

■ ENA-117 ☐ Tuner PC Board Ass'y

Note : ENA-117 ☐ varies according to the areas employed. See note (1) when placing an order.

(Except the U.S.A. , Canada , Australia , Universal Type)



Note(1)

PC Board Ass'y	Designated Areas
ENA-117 [A]	Continental Europe , East Europe
ENA-117 [B]	the U.K.
ENA-117 [C]	Poland , Soviet Union and Rumania
ENA-117 [D]	Germany , Italy

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D102	1SS133	SILICON ROHM	
	D103	1SS133	SILICON ROHM	
	D105	1SS133	SILICON ROHM	
	D106	1SS133	SILICON ROHM	
	D109	1SS133	SILICON ROHM	
	D110	1SS133	SILICON ROHM	
	D115	1SS133	SILICON ROHM	
	D120	1SS133	SILICON ROHM	
	VC105	SVC342(L)	VARICAP SANYO	
	VC106	SVC342(L)	VARICAP SANYO	

⚠ : SAFETY PARTS

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q103	2SC461(B,C)	SILICON HITACHI	
	Q107	2SC535(B,C)	SILICON HITACHI	
	Q108	2SC461(B,C)	SILICON HITACHI	
	Q111	2SD2144S(VW)	SILICON ROHM	
	Q112	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q113	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q114	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q115	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q121	DTA114YS	SILICON ROHM	
	Q123	DTA114YS	SILICON ROHM	
	Q124	DTA114YS	SILICON ROHM	
	Q125	2SK301(Q2)	F.E.T MATSUSHITA	
	Q126	2SC458(D)	SILICON HITACHI	
	Q127	DTC144ES	SILICON ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C101	QCF21HP-223	0.022MF 50V CERAMIC	
	C110	QCZ0202-155	1.5MF 25V CERAMIC	
	C122	QCF21HP-223	0.022MF 50V CERAMIC	
	C126	QCF21HP-223	0.022MF 50V CERAMIC	
	C132	QCS21HJ-561	560PF 50V CERAMIC	
	C133	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C134	QETB1EM-106	10MF 25V ELECTRO	
	C135	QCC21EM-223	0.022MF 25V CERAMIC	
	C136	QCT26CH-180	18PF 50V CERAMIC	
	C137	QCT26CH-221	220PF 50V CERAMIC	
	C138	QCT26CH-241	240PF 50V CERAMIC	
	C139	QCC21EM-223	0.022MF 25V CERAMIC	
	C141	QCS21HJ-270	27PF 50V CERAMIC	
	C142	QCY21HK-272	2700PF 50V CERAMIC	
	C143	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C144	QETB1EM-106	10MF 25V ELECTRO	
	C146	QCT26CH-680	68PF 50V CERAMIC	
	C147	QCT26CH-220	22PF 50V CERAMIC	
	C148	QCT26CH-121	120PF 50V CERAMIC	
	C149	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C150	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C151	QCF21HP-223	0.022MF 50V CERAMIC	
	C152	QCF21HP-223	0.022MF 50V CERAMIC	
	C153	QCC21EM-223	0.022MF 25V CERAMIC	
	C154	QCF21HP-223	0.022MF 50V CERAMIC	
	C155	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C157	QETB1HM-474	0.47MF 50V ELECTRO	
	C158	QCBB1HK-101	100PF 50V CERAMIC	
	C159	QCBB1HK-101	100PF 50V CERAMIC	
	C160	QCBB1HK-221	220PF 50V CERAMIC	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC102	LC7218	I.C. SANYO	
	IC104	LA1266A	I.C. SANYO	
	IC105	LA3401	I.C. SANYO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C161	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C162	QETB1EM-106	10MF 25V ELECTRO	
	C163	QCY21HK-102	1000PF 50V CERAMIC	
	C164	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C165	QETB1HM-474	0.47MF 50V ELECTRO	
	C166	QETB1HM-225	2.2MF 50V ELECTRO	
	C167	QETB1HM-225	2.2MF 50V ELECTRO	
	C168	QETB1HM-475	4.7MF 50V ELECTRO	
	C169	QCF21HP-223	0.022MF 50V CERAMIC	
	C170	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C171	QETB1EM-106	10MF 25V ELECTRO	
	C172	QCVB1CM-103	0.01MF 16V CERAMIC	
	C173	QFLB1HJ-223	0.022MF 50V MYLAR	
	C174	QFLB1HJ-473	0.047MF 50V MYLAR	
	C175	QETB1EM-106	10MF 25V ELECTRO	
	C176	QCY21HK-102	1000PF 50V CERAMIC	
	C177	QCS21HJ-471	470PF 50V CERAMIC	A
	C177	QCS21HJ-561	560PF 50V CERAMIC	B
	C177	QCS21HJ-471	470PF 50V CERAMIC	C
	C177	QCS21HJ-471	470PF 50V CERAMIC	D
	C178	QCS21HJ-471	470PF 50V CERAMIC	A
	C178	QCS21HJ-561	560PF 50V CERAMIC	B
	C178	QCS21HJ-471	470PF 50V CERAMIC	C
	C178	QCS21HJ-471	470PF 50V CERAMIC	D
	C179	QETB1HM-225	2.2MF 50V ELECTRO	
	C180	QETB1HM-225	2.2MF 50V ELECTRO	
	C181	QETB1EM-106	10MF 25V ELECTRO	
	C182	QETB1HM-225	2.2MF 50V ELECTRO	
	C183	QETB1HM-105	1MF 50V ELECTRO	
	C184	QETB1HM-105	1MF 50V ELECTRO	
	C185	QETB1HM-225	2.2MF 50V ELECTRO	
	C186	QETB1HM-474	0.47MF 50V ELECTRO	
	C192	QCC21EM-473	0.047MF 25V CERAMIC	
	C193	QCS21HJ-180	18PF 50V CERAMIC	
	C194	QCS21HJ-180	18PF 50V CERAMIC	
	C195	QEN51HM-474	0.47MF 50V NON POLE	
	C196	QCY21HK-102	1000PF 50V CERAMIC	
	C200	QCF21HP-103	0.01MF 50V CERAMIC	
	C201	QCY21HK-102	1000PF 50V CERAMIC	A
	C201	QCY21HK-332	3300PF 50V CERAMIC	B
	C201	QCY21HK-102	1000PF 50V CERAMIC	C
	C201	QCY21HK-102	1000PF 50V CERAMIC	D
	C202	QCY21HK-102	1000PF 50V CERAMIC	A
	C202	QCY21HK-332	3300PF 50V CERAMIC	B
	C202	QCY21HK-102	1000PF 50V CERAMIC	C
	C202	QCY21HK-102	1000PF 50V CERAMIC	D
	C203	QCY21HK-182	1800PF 50V CERAMIC	
	C204	QCY21HK-182	1800PF 50V CERAMIC	
	C209	QETB1CM-227	220MF 16V ELECTRO	
	C210	QETB1CM-227	220MF 16V ELECTRO	
	C230	QCF21HP-103	0.01MF 50V CERAMIC	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R118	QRD167J-332	3.3K 1/6W CARBON	
	R119	QRD167J-221	220 1/6W CARBON	
	R121	QRD167J-391	390 1/6W CARBON	
	R122	QRD167J-272	2.7K 1/6W CARBON	
	R123	QRD167J-102	1K 1/6W CARBON	
	R124	QRD167J-681	680 1/6W CARBON	
	R125	QRD167J-332	3.3K 1/6W CARBON	
	R126	QRD167J-221	220 1/6W CARBON	
	R131	QRD167J-331	330 1/6W CARBON	
	R132	QRD167J-103	10K 1/6W CARBON	
	R133	QRD167J-473	47K 1/6W CARBON	
	R134	QRD167J-103	10K 1/6W CARBON	
	R135	QRD167J-470	47 1/6W CARBON	
	R136	QRD167J-103	10K 1/6W CARBON	
	R141	QRD167J-472	4.7K 1/6W CARBON	
	R142	QRD167J-331	330 1/6W CARBON	
	R143	QRD167J-103	10K 1/6W CARBON	
	R144	QRD167J-473	47K 1/6W CARBON	
	R145	QRD167J-103	10K 1/6W CARBON	
	R146	QRD167J-560	56 1/6W CARBON	
	R147	QRD167J-103	10K 1/6W CARBON	
	R148	QRD167J-103	10K 1/6W CARBON	
	R149	QRD167J-223	22K 1/6W CARBON	
	R150	QRD167J-103	10K 1/6W CARBON	
	R151	QRD167J-222	2.2K 1/6W CARBON	
	R153	QRD167J-103	10K 1/6W CARBON	
	R154	QRD167J-103	10K 1/6W CARBON	
	R155	QRD167J-562	5.6K 1/6W CARBON	
	R156	QRD167J-682	6.8K 1/6W CARBON	
	R157	QRD167J-103	10K 1/6W CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R158	QRD167J-273	27K 1/6W CARBON	
	R159	QRD167J-561	560 1/6W CARBON	
	R160	QRD167J-183	18K 1/6W CARBON	
	R161	QRD167J-124	120K 1/6W CARBON	A
	R161	QRD167J-823	82K 1/6W CARBON	B
	R161	QRD167J-124	120K 1/6W CARBON	C
	R161	QRD167J-124	120K 1/6W CARBON	D
	R162	QRD167J-124	120K 1/6W CARBON	A
	R162	QRD167J-823	82K 1/6W CARBON	B
	R162	QRD167J-124	120K 1/6W CARBON	C
	R162	QRD167J-124	120K 1/6W CARBON	D
	R163	QRD167J-392	3.9K 1/6W CARBON	
	R164	QRD167J-392	3.9K 1/6W CARBON	
	R165	QRD167J-274	270K 1/6W CARBON	
	R166	QRD167J-274	270K 1/6W CARBON	
	R167	QRD167J-473	47K 1/6W CARBON	
	R168	QRD167J-103	10K 1/6W CARBON	
	R169	QRD167J-103	10K 1/6W CARBON	
	R171	QRD167J-682	6.8K 1/6W CARBON	
	R172	QRD167J-682	6.8K 1/6W CARBON	
	R179	QRD167J-562	5.6K 1/6W CARBON	
	R180	QRD167J-472	4.7K 1/6W CARBON	
	R181	QRD167J-222	2.2K 1/6W CARBON	
	R182	QRD167J-181	180 1/6W CARBON	
	R190	QRD167J-472	4.7K 1/6W CARBON	
	R194	QRD167J-472	4.7K 1/6W CARBON	
	R195	QRD167J-473	47K 1/6W CARBON	
	R196	QRD167J-222	2.2K 1/6W CARBON	
	R197	QRD167J-222	2.2K 1/6W CARBON	
	R198	QRD167J-822	8.2K 1/6W CARBON	
	R199	QRD167J-472	4.7K 1/6W CARBON	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E12184-201(S)	PRINTED BOARD	
	J101	VMC0107-007	CONNECT TERMINAL(7PIN)	
	L106	EQL3001-102K	INDUCTOR	
	L111	EQL2103-393	INDUCTOR	
	L112	EQL2103-393	INDUCTOR	
	T101	EQR1111-014	AM RF COIL	
	T102	EQR1111-005	AM RF COIL	
	T103	EQR1207-015	MW OSC COIL	
	T104	EQR1307-009	LW OSC COIL	
	T105	EQT2140-017	I.F. TRANSFORMER	
	T107	ECB1560-008	CERAMIC FILTER	
	AT101	EMB41YV-301K	ANTENNA TERMINAL	
	CF101	ECB2118-007R	CERAMIC FILTER	
	CF102	ECB2118-007R	CERAMIC FILTER	
	EP101	E70225-001	EARTH PLATE	
	FE101	EAF2203-003	FRONT END	A
	FE101	EAF2203-003	FRONT END	B
	FE101	EAF2301-001	FRONT END	C
	FE101	EAF2203-003	FRONT END	D
	JB103	EMV7125-005R	CONNECTOR(5PIN)	
	LP102	EQF0102-001	LOW PASS FILTER	A
	LP102	EQF0102-001	LOW PASS FILTER	B
	LP102	EQF0102-001	LOW PASS FILTER	D
	TC105	ENZ1003-006	TRIMMER	
	TC106	ENZ1003-006	TRIMMER	
	XT102	ECX0007-200KC	RESONATOR	
	XT103	ECX0000-456KR	RESONATOR	

⚠ : SAFETY PARTS

Accessories List

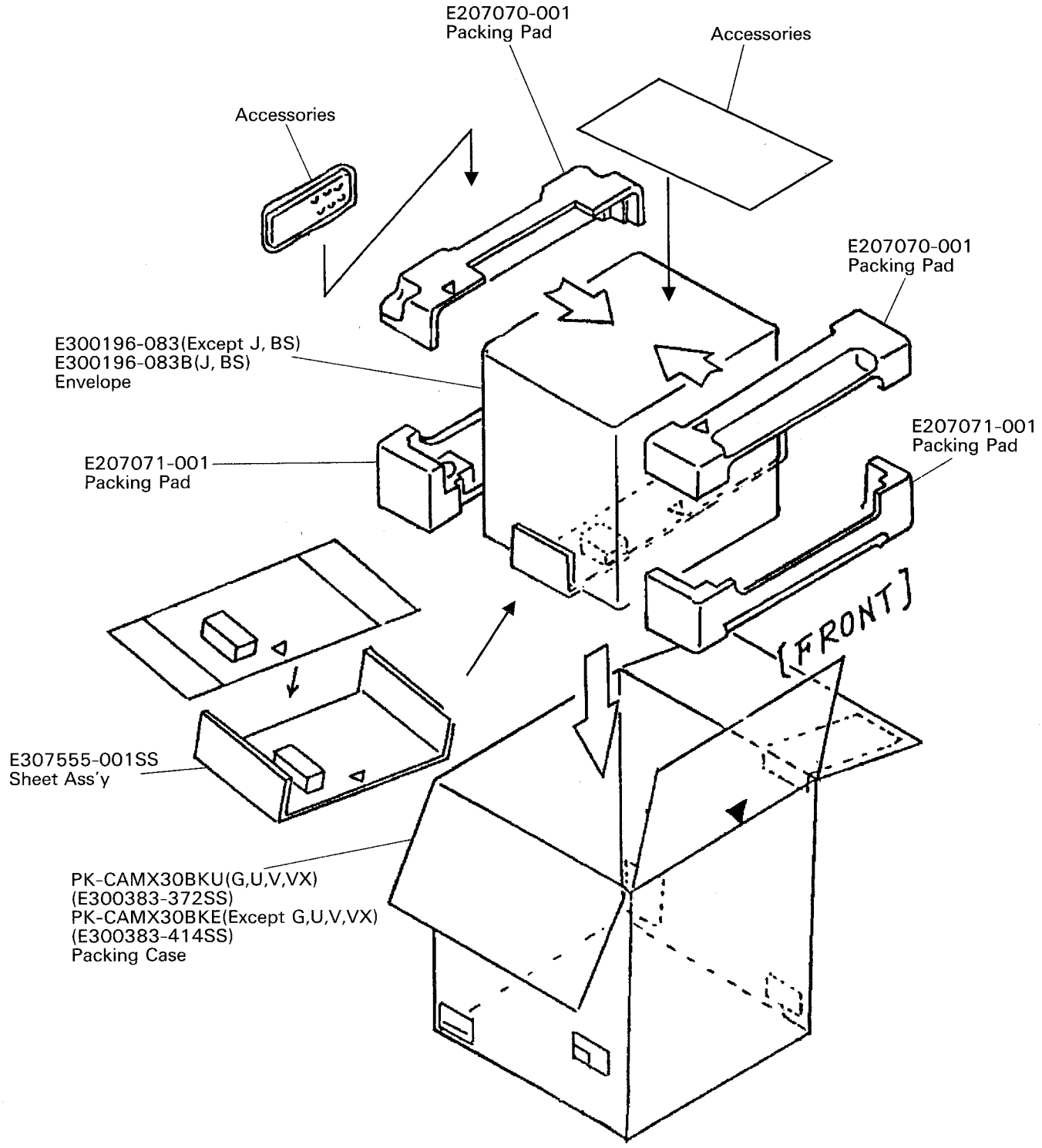
⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1722A	Instruction Book	1		J
	E30580-1691B	Instruction Book	1		C, U, A, E, EF, G
	E30580-1691BBS	Instruction Book	1		BS
	E30580-1692A	Instruction Book	1		GI
	E30580-1721A	Instruction Book	1		V, VX
	BT-20025K	Warranty Card	1		C
	BT-20117	Warranty Card	1		G
	BT-20122	Warranty Card	1		A
	BT20060	Warranty Card	1		BS
	BT-20122-1	Sticker	1		A
	BT20066A	EEC Agency	1		BS
	BT20071A	Service Center List	1		C
	E43486-340A	Safety Sheet	1		BS
	E72360-001	Caution Sheet	1		C
	QZL1008-001	FTZ Information Sheet	1		G
	E67007-001	Wire Antenna	1		G
	EQB4001-015	AM Loop Antenna	1		
	EWP103-009U	Speaker Cord Ass'y	2		
	EWP502-005K	Built in Antenna	1		Except G
	EMZ2001-011	Adapter	1		E, EF, BS, GI, V, VX
	BT-20047E	Warranty Card	1		J
	BT-20108A	Service Information	1		J
	E66416-003	Envelope	1	for Warranty Card	J
⚠	E04056	Siemens Plug	1		U
⚠	QMP1E00-183	Power Cord	1		J, C
⚠	QMP7530-183	Power Cord	1		U
⚠	QMP25C0-183	Power Cord	1		A
⚠	QMP3950-183E	Power Cord	1		Except J, C, U, A, BS
⚠	QMP5510-183BS	Power Cord	1		BS
	UM-4NJ-2PSA	Battery	1		
	RM-SEMX30	Remote Controller	1		
	RM-SR85UBATC	Battery Cover	1		
	E35497-019	Caution Sheet	1	220V	
	QPGA025-03505	Envelope	1		

⚠: Safety Parts

The Marks Designated Areas

J·····the U.S.A.
C·····Canada
A·····Australia
G·····Germany
GI·····Italy
BS·····the U.K.
E, EF·····Continental Europe
V·····East Europe
U·····Universal Type
VX·····Poland, Soviet Union and Rumania
No mark indicates all areas.

Packing Materials and Part Numbers



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